

AMERICAN Build the Ultimate **Get-Home Kit**

SURVIVAL

GUIDE

Vol. 5 Issue 7

*HOW TO COMBAT
DEADLY TEMPERATURES*

HEAT KILLS

THE ZIKA VIRUS

What You Need to Know

HEALING WOUNDS

With Sugar

3 CLASSIC KNIVES

Redesigned

SURVIVAL PRACTICE

Get Out and Do It

BURN & DEHYDRATION

Emergency Skills

GEAR 21st CENTURY BUSHCRAFT + TACTICAL SMOKE

U.S. \$8.99 JULY 2016 DISPLAY UNTIL 06/28/16



0 74470 01319 8

ENGAGED MEDIA INC.



- Trijicon AccuPoint TR24G 1-4x24 Riflescope \$1,020.00
- BCM® Diamondhead Folding Rear Sight \$119.00
- BCM® KMR-A15 KeyMod Rail Handguard 15 Inch \$199.95
- BCMGUNFIGHTER™ KMSM KeyMod QD Sling Mount \$17.95
- BCM® Diamondhead Folding Front Sight \$99.00
- BCMGUNFIGHTER™ Compensator Mod 0 \$89.95
- BCM® Low Profile Gas Block \$44.95
- BCMGUNFIGHTER™ Stock \$55.95
- BCMGUNFIGHTER™ QD End Plate \$16.95
- GEARWARD Ranger Band 20-Pak \$10.00
- BCMGUNFIGHTER™ Grip Mod 0 \$29.95
- BCMGUNFIGHTER™ Vertical Grip Mod 3 \$18.95
- BCM® A2X Flash Suppressor \$34.95



B5 Systems SOPMOD Bravo Stock
\$58.00



Blue Force Gear VCAS Sling
\$45.00



BCM® PNT™ Trigger Assembly
Polished - Nickel - Teflon
\$59.95



Wilson Combat Tactical Trigger
\$269.95



Inforce WML-HSP
\$119.00



Trijicon TA31RCO-M4 ACOG 4x32
\$1,422.05




Aimpoint PRO
Patrol Rifle Optic
\$424.00



BCM® KMR-A KeyMod Free Float Rail Handguards
Same as the fantastic original KMR but machined from aircraft aluminum!

BCM 9 Inch KMR-A9 **\$176.95**
BCM 10 Inch KMR-A10 **\$179.95**
BCM 13 Inch KMR-A13 **\$189.95**
BCM 15 Inch KMR-A15 **\$199.95**



PWS DI KeyMod Rail Handguard
Free float rail for AR15/M4 pattern rifles.

PWS DI 12 Inch Rail **\$249.95**
PWS DI 15 Inch Rail **\$249.95**



PWS KeyMod Polymer Bipod Adapter
\$23.95



Daniel Defense SLiM Rail Handguard
Slim, Light, Modular KeyMod Free Float

DD SLiM Rail 12.0 **\$265.00**
DD SLiM Rail 15.0 **\$265.00**



Daniel Defense KeyMod Bipod Adapter
\$47.00



Daniel Defense KeyMod 1 O'Clock Offset Rail Assembly
\$39.00



BCMGUNFIGHTER™ KeyMod 1-Inch Ring Light Mount
For 1" diameter lights **\$39.95**



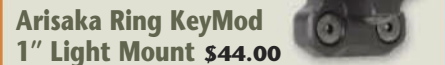
BCMGUNFIGHTER™ KeyMod Modular Scout Light Mount
For SureFire Scout Light **\$39.95**



BCMGUNFIGHTER™ KeyMod Modular Light Mount
For 1913 mounted lights **\$39.95**



Arisaka Inline KeyMod Scout Mount **\$34.00**



Arisaka Ring KeyMod 1" Light Mount **\$44.00**



Thorntail KeyMod Offset Adaptive Light Mounts

Thorntail 1.030 Mount **\$70.00**
Thorntail M3M6 1913 Mount **\$50.00**



Arson Machine Company KeyMod Light Mounts

Scout M600 Mount **\$48.00**
1" Ring Mount **\$44.00**

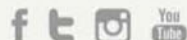
GROUNDTM EFX

STORM
SERIES

MX60



Large simple to use digital backlit interface
8 metal categories and adjustable discrimination
Signal strength and depth indicators
Can detect quarter sized coins up to 10" deep



GROUND EFX.COM



FIND YOUR TREASURE

CONTENTS

TABLE OF FEATURES



14

SUMMER THREATS

Summer outings carry the risk of injury. Here's how you can protect yourself.

Story by Joe Volpe

36

ALL ABOUT ZIKA VIRUS

What is the Zika virus, and what should you do about it?

Story by Joe Alton, M.D.

78

BUGOUT

Practice makes perfect, especially when you bug out. Here's one experience.

Story by Larry Schwartz

REVIEWS

22

21ST-CENTURY BUSHCRAFTER

The Spyderco Proficient—a new take on the bushcraft knife

Story by Garrett Lucas

28

THE GUN TO GRAB

The best survival gun depends on your situation.

Story by Steven Paul Barlow

44

UPDATED CLASSIC KNIVES

Three new takes on classic knife designs.

Story by Kevin Estela

70

THE HIDDEN WOODSMEN

Check out these new products from an innovative gear maker.

Story by Kevin Estela

86

MOST VALUABLE PERFORMER

With its MVP Scout, Mossberg found a way to stand out in a crowded field.

Story by Brad Fitzpatrick

92

DEFENSIVE DECOR

Tactical Walls adds a new dimension of concealment to home furnishings.

Story by Garrett Lucas

100

AUTOMOBILE SURVIVAL KIT

One veteran's choice of items for a "get-home" kit

Story by Christopher Nyerger

106

WHERE THERE'S SMOKE

Enola Gaye's smoke grenades—must-have tools

Story by Garrett Lucas

MEDICAL

120

SUGAR IN YOUR MEDICINE BAG

Seriously consider using sugar for wounds.

Story by Alan Halcon

124

THE MEDICINE FINALLY WORKED

Some experiences with the remarkable Aloe plant

Story by Christopher Nyerger

COMMS

54

HAM 101

Get started with the communication system-of-choice when the grid goes down.

Story by James Jeffries

HOW-TO

112

BREWING—A SURVIVAL SKILL?

Making a simple and primitive beer is really easy. And, you probably already have most of the ingredients in your kitchen.

Story by Pascal Baudar

TRAINING

62

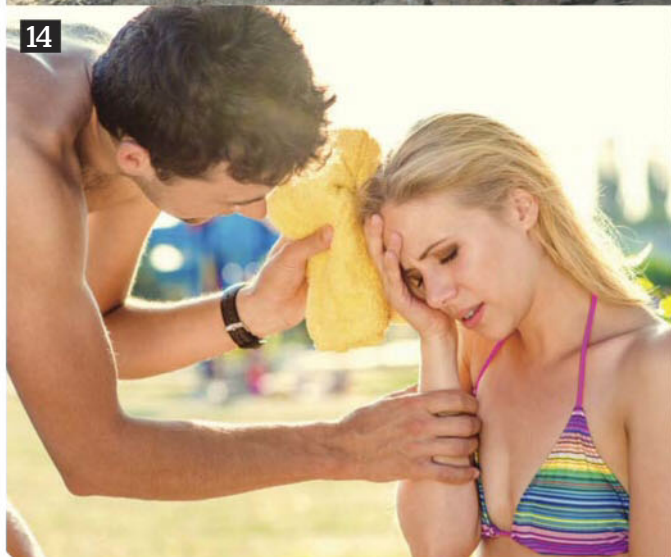
DEALING WITH THE HEAT

Various practical ways to survive the extreme heat

Story by Christopher Nyerger

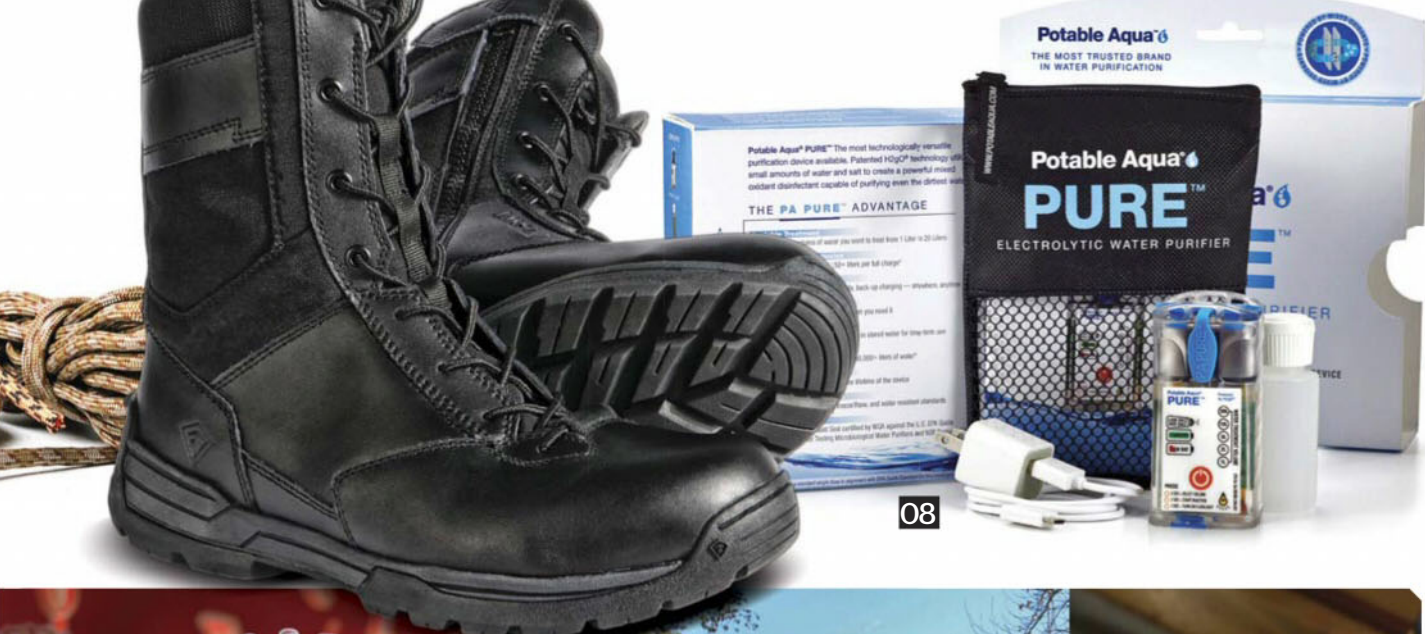


78



14

AMERICAN SURVIVAL GUIDE (ISSN 2331-8937) is published 12 times a year—January, February, March, April, May, June, July, August, September, October, November, December—by Engaged Media, Inc., 22840 Savi Ranch Pkwy., Suite 200, Yorba Linda, CA 92887. POSTMASTER: Send address changes to American Survival Guide c/o VSI, Inc. 905 Kent St., Liberty, MO 64068. © 2016 by Engaged Media, Inc. All rights reserved. Reproduction of any material from this issue in whole or in part is strictly prohibited. GST #R55050365RT001 Canada Post: Publications Mail Agreement #40612608. Return undeliverable Canadian addresses to: PITNEY BOWES, INC. P.O. Box 25542 London, ON N6C 6B2, Canada..



08



36



86



112



62



106



100

DEPARTMENTS

6

FIRST WORDS

8

NEW PRODUCTS

128

SURVIVAL LITERATURE

130

LAST WORDS

Some articles in this issue might include stock images that are the property of Getty Images.

WORDS

FIRST

VOLUME 5 ISSUE 7

EDITORIAL

Doug Jeffrey Editorial Director
Christopher Nyerges Editor
Amy Maclean Managing Editor
Henry Z. De Kuyper Senior Staff Photographer

DESIGN

Katia Sverdlova Design Director

CONTRIBUTORS

Joe Alton, M.D., Steven Paul Barlow, Pascal Baudar, Kevin Estela,
Brad Fitzpatrick, Alan Halcon, James Jeffries, Garrett Lucas, Dude McLean,
Larry Schwartz, Joe Volpe

ADVERTISING

Spiro Demetriadi Publisher
Gabe Frimmel Ad Sales Director
(714) 200-1930
gfrimmel@engagedmediainc.com
Casey Clifford Senior Account Executive
(714) 200-1982
Mark Pack Senior Account Executive
(714) 200-1939
Charles Dorr Account Executive
(714) 200-1931
John Cabral Advertising Design
Gennifer Merriday Advertising Traffic Coordinator
Kristan Beckman Advertising Traffic Coordinator

DIRECT MARKETING GROUP

John Bartulin (866) 866-5146 ext. 2746
Jhovyn Zerna (866) 866-5146 ext. 2965

OPERATIONS

Subroto Mallick Business Analytic Manager
Robert Short IT Manager
Harsh Srivastava Newsstand and Circulation Analyst
Shailesh Khandelwal Subscriptions Manager
Alex Mendoza Administrative Assistant
Jeno Torres Administrative Assistant
Victoria Van Vlear Intern Program Manager
Arvind Sidhu Prepress Manager

EDITORIAL, PRODUCTION & SALES OFFICE

22840 Savi Ranch Parkway, #200, Yorba Linda, CA 92887
(714) 939-9991 • Fax: (800) 249-7761
www.americansurvivalguidemag.com
www.facebook.com/americansurvivalguidemagazine
www.facebook.com/embybeckett

AMERICAN SURVIVAL GUIDE (ISSN 2331-8937) is published in January, February, March, April, May/June, July, August, September, October, November and December by Engaged Media Inc., LLC, 22840 Savi Ranch Parkway, #200, Yorba Linda, CA 92887. **POSTMASTER: SEND ADDRESS CHANGES TO AMERICAN SURVIVAL GUIDE, C/O ENGAGED MEDIA INC., VSI, INC., 905 KENT ST., LIBERTY, MO 64068.**
© 2016 by Engaged Media, Inc. All rights reserved. Reproduction of any material from this issue in whole or in part is strictly prohibited. GST #R55050365RT001. Canadian Post: Publications Mail Agreement Pitney Bowes, Inc., P.O. Box 25542, London, ON N6C 6B2, Canada

CUSTOMER SERVICE

Engaged Media, Inc.
22840 Savi Ranch Parkway, Ste. 200, Yorba Linda, CA 92887
Subscriptions, Address Changes, Renewals, Missing or Damaged Copies
(800) 764-6278
(239) 653-0225 Foreign Inquiries
subscriptions@engagedmediainc.com
customerservice@engagedmediainc.com
Back Issues: www.engagedmediamags.com
Books, Merchandise, Reprints
(800) 764-6278 • Foreign (239) 653-0225
Letters to Editor, New Products, or to Contribute a Story or Photo
amaclean@engagedmediainc.com

SUBSCRIPTION RATES

\$32.95/1 year, \$52.95/2 years. Outside the U.S., add \$32.00 per year payable in U.S. funds. Single copy price is \$8.99.
Please allow 6 to 8 weeks for new subscriptions to begin.

ENGAGED
MEDIA, INC.

ENGAGED MEDIA INC.
Celia Merriday HR and Office Management
Jason Mulrone Director of Content
Pinaki Bhattacharya Vertical Manager
Philip Trinkle Newsstand Sales Director

This magazine is purchased by the buyer with the understanding that information presented is from various sources from which there can be no warranty or responsibility by Engaged Media Inc., as to the legality, completeness or technical accuracy.

GST #R55050365RT001
Canada Post: Publications Mail Agreement #40612608
Return undeliverable Canadian addresses to:
PITNEY BOWES, INC., P.O. Box 25542, London, ON N6C 6B2, Canada

EXPANDING YOUR SURVIVAL AWARENESS

Now that it's summer, we, at *American Survival Guide*, are filling the pages of this July issue with news and information appropriate to the season. We hope you derive great benefit from each article.

Folks, we live in a dangerous world, with real and imagined threats from all quarters. You never know which threat will affect your personal well-being, so the best course of action is to constantly expand your awareness of the world around you.

In this *American Survival Guide*, we have made a concerted effort to expand your survival awareness of the world in which we currently live.

During the summer, with families venturing out into the woods and beaches, various wilderness hazards can occur, and some can be life threatening. Our authors have discussed various scenarios that could apply to you, either due to extreme heat or arising from medical issues. When you read these articles, you should constantly ask yourself, *What would I do if I were in this situation?* to keep these issues alive and dynamic in your mind.

As usual, we provide reviews and commentaries about firearms and new gear you might be considering for your own pack or home.

For instance, you will enjoy Garrett Lucas'

review of some of Tactical Walls' products (see page 92). These hidden-in-plain-sight items prove it is entirely possible to have your survival gear at hand and right in front of your eyes—but not visible to others.

Survival is a multifaceted concept, and the root idea is to continue to live. There is also the implication of overcoming any obstacles to our survival, whether natural or man made. We know that the cycles of nature include floods, droughts, earthquakes, tornadoes, along with other serious threats to our short- and long-term survival.

The world we live in is a complex social soup, and we can expect terrorism, diseases, inept leadership, economic fraud and cheating, and destruction of the soil—just some of the many threats to our long-term survival and well-being.

Our view is that we do not hide our heads in the sand. We look at the world objectively as much as possible. And we do our best to provide viable solutions to each and every survival issue that continues to dog and threaten us. That includes the gear we need in our cars and homes, the skills we need to develop within our families and communities, and our day-to-day mindset.

That's who we are!

Christopher Nyerges, Editor

TOPS KNIVES

www.topsknives.com

Enter to win a
FREE C.U.T. 4.0

When you see this ad share it on
instagram with the hashtag

#TOPSKnives

Don't forget to follow us on instagram at
<https://www.instagram.com/topsknives>
for more details.

101%
Made in the
USA



C.U.T. 4.0
SWANAGON

PRODUCTS

NEW

1

First Tactical Duty Boot

First Tactical's footwear combines the strength and reliability of a traditional tactical boot with the comfort of a running shoe. Each boot features a fitted heel strike window that provides stability and cushioning while in motion.

MSRP

\$79.99–\$99.99

URL

FirstTactical.com

2

Super Shovel

Looking more like a lunchtime "spork," the Super Shovel is made with 13-gauge tempered steel and is powder coated to prevent rust. The head is 11.5x8.5 inches, and the fiberglass shaft is attached to the handle and head via locking pins. When removed, the 40-inch tool collapses to just 20 inches. The D-grip handle is solid polymer, while the shaft is hollow and can be used to store emergency items.

MSRP

\$90

URL

KrazyBeaverTools.com

3

Alaska Survival Bracelet

The Alaska Survival Bracelet is a nice addition to outdoor wear, but it's actually a tool developed for life-threatening situations. Woven into the paracord bracelet is an emergency whistle, flint and steel, and fire-starting jute drenched in paraffin wax, making it waterproof and easy to start a fire in any weather. In addition, you can take the bracelet apart and stretch the paracord to 17 feet, if you need rope to tie together an emergency shelter.

MSRP

\$35

URL

AlaskaParacord.com

5

Rugged Lantern

Zippo's Rugged Lantern was built for durability. Drop it from 5 feet high; plunge into water with it; it will still stay lit. Charged from a standard 120-volt source or via the included car charger, the lantern has a burn time of approximately 10 hours on high while producing 220 lumens of light. It can endure 15 hours on medium (50 percent power) and 40 hours on low (10 percent power). An easy-to-locate red button diffuses light over a wide area from a single LED bulb when pressed.

MSRP

\$80

URL

Zippo.com

4

Havoc 30 Backpack

The Havoc 30 is a low-profile, lightweight and durable backpack made from 500- and 1,050-Denier nylon—ideal for everyday use. It features quick-access waist belt pockets for extra magazines, zipper-secured water bottle pockets and additional general-use pockets. The padded pocket on top offers protection for sensitive items, and the MOLLE webbing allows for additional storage. Available in black, double tap, sandstone and storm.

MSRP

\$140

URL

511Tactical.com

6

Liberty Bottles

Liberty Bottleworks' 3003 aluminum bottles are nontoxic and nonleaching and completely BPA free. They feature an array of colors and designs printed with flexible food-grade coatings that are free of volatile organic compounds. The caps open and close with a quarter turn and are rated to 45 psi. Every bottle is made from U.S.-sourced recycled materials and is completely made in the United States. Available in 16-, 24- and 32-ounce sizes.

MSRP

\$15

URL

LibertyBottles.com

3





4

2

5

6

1



AMERICA'S PREPAREDNESS SUPPLIER

OUTDOOR PRODUCTS FOR

**RECREATION &
SURVIVAL**

CALL TOLL FREE 1-800-441-8855

ORDER ONLINE www.majorsurplus.com

VISIT OUR STORE: 435 W. Alondra Blvd. Gardena, CA 90248

FIND EVERYTHING YOU NEED

CAMPING GEAR



**MILITARY &
OUTDOOR APPAREL**



**TOOLS &
EQUIPMENT**



& MORE

PRODUCTS

NEW

7

Sporty, Limited-Edition Watch

The engineers at Bravo Company Manufacturing are some pretty smart cats. They were tossed into a room and told to develop a timepiece that was both precision crafted and as rugged as the company's carbines. And they did it—with the BCM MK15 tritium timepiece. This sporty watch is housed in a case made from 316L stainless steel and finished in a PVD brushed black. It is water resistant to 200 meters and has a 13-jewel, gold-plated, Swiss-made chronograph movement. Each is laser engraved with a unique serial number and deploys in a custom-injection, molded-glass, fiber-reinforced case. Bravo Company has produced a limited edition of 2,500 watches.

MSRP

\$595

URL

BravoCompanyMfg.com

8

Ultimate Power Muffs

It's not magic, but it's pretty darned close. Slide these Walker's Game Ear Power Muffs on, and you can hold a conversation with your buddies while still shutting out those harmful, loud noises on the range. The muffs accomplish this via sound-activated compression, which reduces the amplification of those sounds to a safe level. These earmuffs have a noise-reduction rating of 27 db. They work, and they are great. We wear them.

MSRP

\$139.95

URL

WalkersGameEar.com

9

Colossus 18 Million Candle Power Rechargeable Spotlight

Boasting a powerful Philips H4 12V 130-watt halogen bulb, dual recharge options and a burn time of approximately 20 minutes, the Colossus 18 Million Candle Power Rechargeable Spotlight has an adjustable swivel stand that makes it easy to point at anything you want to illuminate, whether it is a flat tire or space to set up your tent.

MSRP

\$100

URL

CyclopsSolutions.com

11

Potable Aqua PURE Electrolytic Water Purifier

The NEW Potable Aqua PURE Electrolytic Water Purifier is the smallest and most cost-effective water purification device on the market. Using a simple brine (salt and water) solution, the PA PURE device produces a powerful mixed oxidant disinfectant capable of purifying even the dirtiest water. Great for campers, hikers, military, emergency organizations and anyone needing drinkable water, Potable Aqua PURE inactivates viruses, bacteria, Giardia and Cryptosporidium, killing 99.9 percent of all organisms without the need to pre-filter or pump.

MSRP

\$119.99

URL

PotableAqua.com

10

Bushnell 1-mile ARC

Rangefinders have continued to improve over the years, but they keep getting even better—as evidenced by Bushnell's new 1-mile ARC with CONX technology. This military-grade rangefinder has several advancements that make it a standout product in performance and added ease of use. It incorporates Bluetooth technology to connect with a smartphone app to use or create a custom ballistic curve.

In addition, it's able to connect with CONX-enabled Kestrel devices to automatically include environmental conditions into the shooting equation. The 1-mile ARC has a 7X magnifier and is waterproof, as well. For the long-distance hunter or marksman, this tool is a definite plus for simplifying and automating calculations to compensate for wind and holdover at longer ranges.

MSRP

\$819.95

URL

Bushnell.com

10



12

HL8R Headlamp

Remember Coast's popular HL8? The HL8R is the improvement, and it can recharge. It emits 800 lumens on high for four hours and 15 minutes. On medium, output drops to 245 lumens, while the low setting is 50 lumens (but it will last for 62 hours). The headlamp can be easily shifted from a wide flood to a long-reaching spot with a maximum distance of 702 feet. The rechargeable pack can be charged via micro USB, and the HL8R can also be powered by four AA batteries (separate pack included).

MSRP

\$180

URL

CoastPortland.com

11



7



12



9



8





GETTY IMAGES.COM/BOURSEFFELER/EVEM



**PREVENT, PREPARE FOR AND
RESPOND TO HEAT-RELATED
INJURIES**

BY BY JOE VOLPE

SUMMER THREATS

“WITH THE SUMMER’S HOT TEMPERATURES, YOU CAN BE FACED WITH HEAT-RELATED INJURIES, SUCH AS HEAT CRAMPS, HEAT EXHAUSTION AND HEAT STROKE.”

Summer in the wilderness brings a unique set of risks and possible injuries. You can mitigate some accidents by being alert and ready to respond to emergencies. You should be able to recognize and care for different types of injuries. With the summer’s hot temperatures, you can be faced with heat-related injuries, such as heat cramps, heat exhaustion and heat stroke.

Without a doubt, first aid emergencies will occur, and you should know how to prevent, prepare for and respond to them in a wilderness environment. If someone in your party is seriously injured and immediate help is not available, you should know some basic first aid and survival techniques. Every remote undertaking is a balance between risk and safety, and the odds of getting injured can happen at any time—burns or other heat-related injuries among them. Not taking care of a small problem immediately can result in an emergency later.

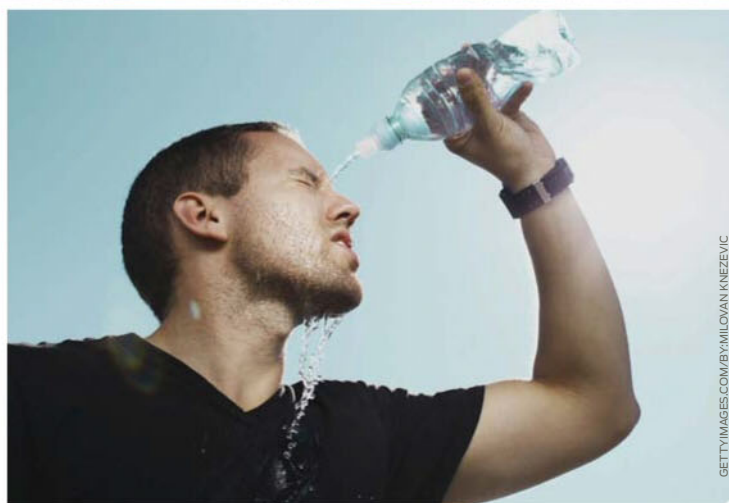
Heat-related illnesses are preventable. They occur when the body is not able to cool itself and overheats. Heat illness can affect anyone. The more direct sun, heat and humidity, the greater the risk. And, you will get dehydrated if you fail to drink enough water.

Heat cramps. When you perspire, you lose electrolytes. Electrolytes are needed for your body to function.

Symptoms of heat cramps are heat rash and itching; hot, moist skin; and painful spasms or cramps in your arms, legs or abdomen. Heat cramps will occur in individuals who perspire profusely and then drink large quantities of water—but still do not adequately replace the body’s salt loss.



› With heat stroke, a person can die unless treated promptly. You have to lower their body temperature as fast as possible.



Heat exhaustion and heat stroke are the most serious heat illnesses. Heat exhaustion is a mild form of shock caused when the circulatory system begins to fail as a result of the body’s inadequate effort to give off excessive heat. Symptoms begin with headaches, dizziness, light-headedness or fainting, weakness, mood changes, irritability or confusion, feeling sick to your stomach, extreme perspiring and pale, clammy skin.

Checking your urine is a simple way to determine if you are dehydrated. The darker the urine, the less hydrated you are, and it is urgent to drink water or a heavily diluted sports beverage, such as Gatorade.

Move the victim to a cool, shaded area. Don’t leave them alone. Loosen and remove any heavy clothing. Lay the person on their back and raise their legs about 6 to 8 inches. If the person is sick to their stomach, lay them on their side in case of vomiting (people can drown in their own vomit). Try to cool the person by fanning them and cooling their skin with a cool spray mist of water or a wet cloth.

Heat stroke is more serious than heat exhaustion but has similar symptoms. Additionally, advanced symptoms might include seizures, fits, convulsions, loss of consciousness, no detectable pulse and a very high temperature—104 degrees or higher. With heat stroke, a person can die unless treated promptly. You have to lower the their body temperature as fast as possible. If ice is available, place ice packs in armpits and groin



◀ Heat exhaustion is a mild form of shock when the circulatory system begins to fail.

area. However, do not give any liquids to an unconscious victim.

How can you determine if the person has heat exhaustion or a more serious heat stroke? Ask them a few simple questions, such as their name, the day of the week and where they are. If they can't answer these questions, you can assume that it is heat stroke.

When you're working in the heat, it's important to drink small quantities of water throughout the day. One quart or more over the course of an hour may be necessary when the environment is hot and you're perspiring more than usual.

BURNS

The first step in treating burns is to conduct a thorough analysis. What caused the burn? Is the danger still present? Burns can be caused by heat, chemicals, electrical current or radiation.

You can get a heat burn from fires,



“HEAT-RELATED ILLNESSES ARE PREVENTABLE. THEY OCCUR WHEN THE BODY IS NOT ABLE TO COOL ITSELF AND OVERHEATS.”

boiling water, steam, hot pots and melting substances, such as plastic or tar. Chemical burns can be caused by reactions to pesticides, chemical fuels, or battery acid. Electrical burns can be caused by electrical current, downed power lines or lightning. Radiation or sun burns can be from the sun. We know that using a sunscreen with an SFP 15 rating or higher should prevent sun burn. If you are at a high altitude, where sun exposure is more intense, and when you're around a body of water, extra precautions should be taken.

First aid treatment for burns is to cool the burned area and cover it with a sterile cloth to reduce the risk of infection by keeping the fluids in and germs out. The severity of burns might affect the outer,



middle or innermost layer of skin. These layers are classified as superficial, partial-thickness or full-thickness burns.

Sunburn is generally classified as superficial if it has only burned the outer layer of skin. If there are signs of blistered skin, it is classified as a partial-thickness burn. Superficial and a partial-thickness burns should both be treated with cool, running water for at least 15 minutes to cool the layers of skin and stop the burning process.

Cover the burn loosely with a dry, sterile cloth to keep air out, reduce pain and prevent infection. Never apply ice, because it will cause vessel constriction. Do not



GETTYIMAGES.COM/BY:IMAGE(S) BY SARA LYNN PAIGE



GETTYIMAGES.COM/BY: DORLING KINDERSLEY

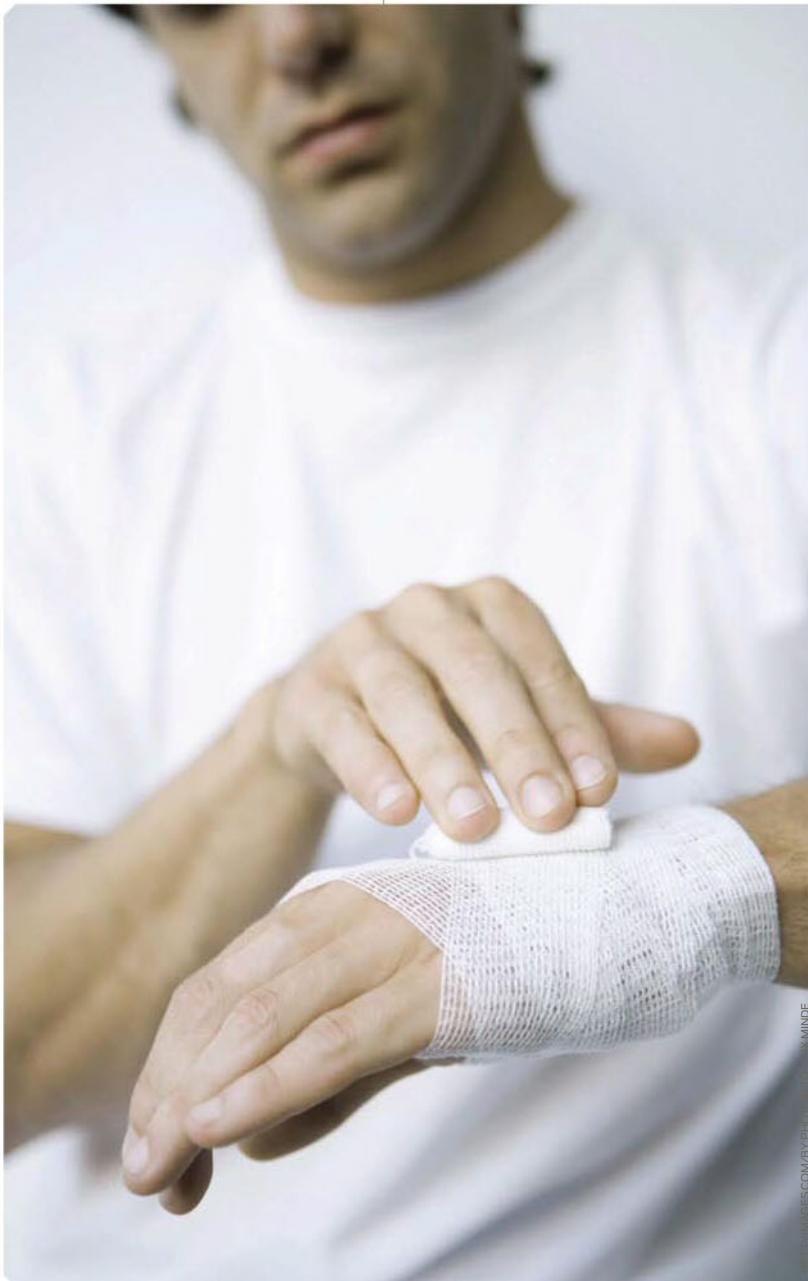
➤ Sunburn should be treated with cool, running water for at least 15 minutes to cool the layers of skin and stop the burning process. Do not apply any ointments.



GETTYIMAGES.COM/BY:CHOJA



GETTYIMAGES.COM/BY:PHOTOALTO, ODDION DIMA



GETTYIMAGES.COM/BY:PHOTOALTO, ODDION DIMA

◀ Above (middle and bottom) and left: Full-thickness burns are very serious, because there is damage that destroys all layers of skin and some or all underlying nerves and tissues. Do not apply water to full-thickness burns, and lightly wrap to prevent infection.

“WHEN GOING INTO THE WILDERNESS, IT IS YOUR RESPONSIBILITY TO HAVE THE PROPER KNOWLEDGE AND EQUIPMENT TO MAKE YOUR TRIP SAFE AND ENJOYABLE.”

apply antiseptics or any ointments—only cool water. Elevate the burned extremities higher than the heart.

Full-thickness (or third-degree) burns are very serious, because the damage destroys all layers of skin and some or all of the underlying nerves. The skin will look charred and might be relatively painless



GETTY IMAGES / JIMBYE / NEWSWIDEOPEN

“FULL-THICKNESS (OR THIRD-DEGREE) BURNS ARE VERY SERIOUS, BECAUSE THE DAMAGE DESTROYS ALL LAYERS OF SKIN AND SOME OR ALL OF THE UNDERLYING NERVES.”

as a result of the deadening of the blood vessels and nerve damage.

Do not apply water to full-thickness burns, remove shreds of tissue or break any blisters. Cut burned-in clothing around the burn. Cover loosely with dry, clean dressings to keep air out, reduce pain and prevent infection.

Chemical burns are unlike traditional burns and should be treated differently. If the irritant is dry, gently brush away as much as possible. Use lots of cool, running water for fifteen minutes to flush the chemical from the skin. Apply a cool, wet compress to relieve pain. Cover the wound very loosely with a dry, clean cloth so the cloth will not stick to the wound. **ASG**



GETTY IMAGES.COM/BY: SAMANTHA T. PHOTOGRAPHY

DARKNESS

IS COMING



Fire, flood, hurricane, tornado, earthquake, terrorism, nuclear/biological/chemical, destruction, panic. These disasters present lethal challenges in daylight. They are compounded by darkness. Are you ready? TNVC is the only place to obtain all the necessary low light and no light gear to not only survive, but endure and prevail when disaster strikes. Don't be caught in the dark!

NIGHT VISION THERMAL LASERS LIGHTS HELMETS MOUNTS



www.TNVC.com

© Copyright 2014, TNVC, All Rights Reserved



Booth 6502



21ST-CENTURY BUSHCRAFTER

THE SPYDERCO
PROFICIENT—A
NEW TAKE ON THE
BUSHCRAFT KNIFE

TEXT AND PHOTOS BY GARRETT LUCAS





“SPYDERCO HAS RECENTLY FLIPPED THE SCRIPT ON TRADITIONALISTS BY DEFYING SOME OF THE CARDINAL RULES WITH THE INTRODUCTION OF ITS NEW PROFICIENT BUSHCRAFT KNIFE.”



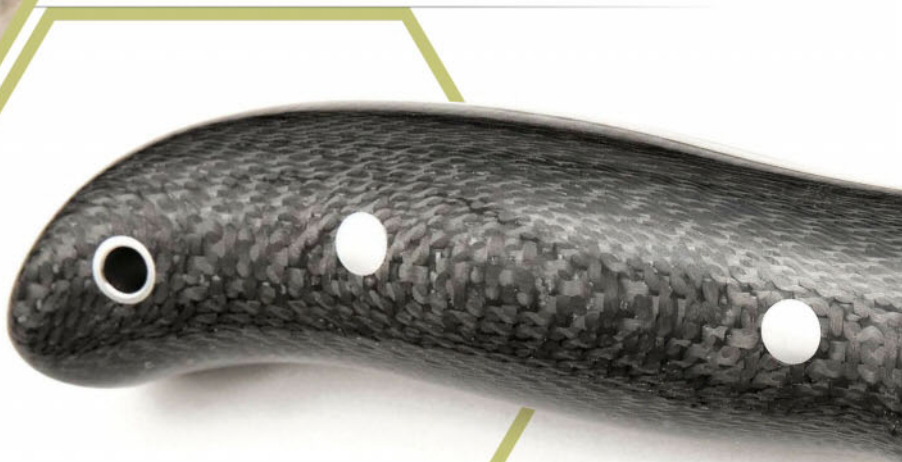
› Two aspects of the blade that stand out from typical bushcraft knives are the full flat grind, which makes an efficient slicer, and the use of CPM S90V steel, which is corrosion resistant and holds an edge significantly longer than high-carbon steel.

The variety of styles and types of knives is overwhelming. Even though it's the same basic tool, there have been countless iterations of knife designs by different people and cultures that span the history of mankind. These differences vary according to culture, personal taste, functionality and each blade's intended use. Even when one specific use is in mind, myriad permutations will spawn as a result of different makers' conceptions of the perfect tool.

There is currently much debate about which knife design is the best for bushcraft. Many purists insist that a high-carbon steel such as O1 is the best choice, because the edge is fairly easy to maintain in the field. Scandi grinds are also considered essential by many, because that style edge is considered to be superior for carving and working with wood and is also one of the easier grinds to sharpen in the field. That may be true for a lot of people, but not for all of us.

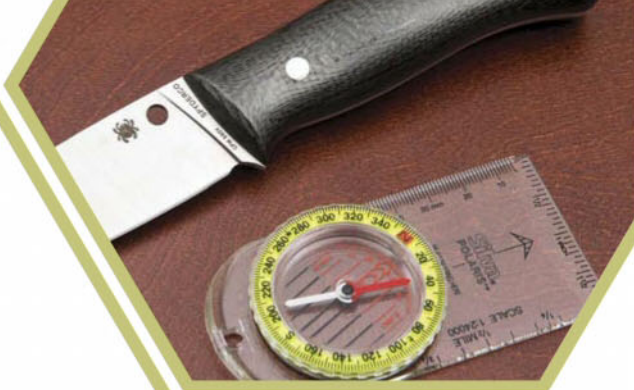
THE PROFICIENT

Spyderco has recently flipped the script on traditionalists by defying some of the "cardinal



◀ The handle on Proficient is a solid piece of carbon fiber which has been cut to fit the knife exactly, and it is nicely contoured for a comfortable grip by the end user—not to mention having an appealing aesthetic about it.

➤ The Spyderco Proficient is a new breed of bushcraft knife with a different blade profile and more updated materials than typical knives of this type.



Spyderco Proficient Specifications

Specifications

- Overall length: 8.75 inches
- Blade length: 4 inches
- Thickness: .14 inch
- Handle material: Carbon fiber
- Blade material: CPM S90V
- Weight: 6.3 ounces

MSRP: \$489.95

rules" with the introduction of its new Proficient bushcraft knife. Designed by Chris Claycomb of Bushcraft UK—no stranger to the field—the Proficient offers the same utility and usability as other bushcraft knives, but it does so with the latest-generation materials and more nontraditional cues.

The Proficient's bloodline is obvious upon inspection of the beautifully sculpted handle. It is the same handle style as Spyderco's Bushcraft knife that was released a few years ago. The first time I held the Bushcraft, I was immediately in love with the handle design. I don't think I've felt a handle on all the knives I've tried over the years that molds so perfectly to my hand.

The main difference with the handle of the Proficient is that it's made of a solid piece of carbon fiber fitted to the full-tang knife. In comparison to the G-10 handle of the original Bushcraft, the carbon-fiber grip makes the Proficient significantly lighter and evens out the balance of the knife.

Another, more obvious, change is the full flat grind on the Proficient, in contrast to the Scandi grind found on Spyderco's Bushcraft knife. This is a welcome change for me, because I'm not terribly enthralled with Scandi grinds, especially those executed by custom or production makers in the United States.

I do have a few actual Scandinavian knives, and the grinds on those seem to flow more

naturally with the blade widths of each knife than on modern knives with a Scandi grind (although there are exceptions to every rule).

Having used Spyderco knives in the past, I am a fan of this manufacturer's flat-grind blades. For me, they provide more latitude in shaving wood for tinder without having to worry about the shoulders of a Scandi grind getting in the way. Also, wood carving won't be the only chore in the woods, and the flat grind creates a more efficient slicer for other tasks. While a Scandi grind is excellent for its intended use, it doesn't transition well to other uses.

CHANGING THE RECIPE

Finally, the least obvious, but probably the most significant, change is Spyderco's decision to use CPM S90V for the blade steel. This radical change is a huge leap

"HAVING USED SPYDERCO KNIVES IN THE PAST, I AM A FAN OF THIS MANUFACTURER'S FLAT-GRIND BLADES."



from a typical bushcraft knife that would most often use a high-carbon steel. I've got all the respect in the world for traditionalists and can appreciate their viewpoints regarding what a bushcraft knife should be, but the use of this steel does resolve a few issues.

CPM S90V is a stainless steel with carbon and vanadium added, which contributes to longer wear resistance—meaning the blade will hold its edge longer. Also, the corrosion resistance is on par with 440C or even higher. This means less maintenance is required by the user to preserve the blade.

Because it is so tough, the down side to CPM S90V is that it's harder to sharpen than something such as O1 steel. That may be worth considering before you take off into the field.

A LITTLE ALONE TIME

Spending time in the woods (or “bush”) is the only way to prove out a knife of this type. I will say that I don't consider myself a “bushcrafter,” per se, because I tend to use more-modern techniques and tools for wilderness living and survival. However, I do

› The sheath that comes with the Spyderco Proficient is a more traditional design, being made from leather. It incorporates a belt loop and has cordage holes for the option of lashing the sheath to the user's pack or gear.



appreciate the value and quality of certain bushcraft blades, and the Spyderco Proficient certainly fits the bill in that regard.

I had the Proficient for a little longer time than usual for review knives, so I had a number of opportunities to take it into the woods and thoroughly appraise its performance. The handling of the Proficient is an experience you just need to feel for yourself. Because of the carbon-fiber grip, the knife is quite light at just 6.3 ounces and balances nicely in the hand.

The overall length of the knife is 8.75 inches, with 4 inches dedicated to the blade. While I was certainly able to baton through appropriately sized wood splits with the Proficient (as some do with their Spyderco Bushcraft knives), that's not my usual approach. When I'm afield, I carry a longer knife for batoning and a shorter one for the finer tasks to save the edge of the smaller knife, as well as to keep from chewing up the baton on the end of a shorter blade.



◀ Far left: A striker wasn't necessary to use with the firesteel. Even from the little steel in a mini kit, a nice shower of sparks was obtained, and the tinder caught fire.

◀ The contoured, carbon-fiber handle molds to the hand nicely for a comfortable grip and improved usability.

***“SPYDERCO HAS
CREATED A 21ST-
CENTURY BUSHCRAFT
KNIFE I’M SURE MANY
WILL APPRECIATE AND
ENJOY.”***



I was able to get paper-thin shavings, or “fuzz,” off bone-dry wood with the Proficient, and that was the only tinder needed to take a spark from a firesteel to get started. Usually, the shavings I’m able to produce make fine kindling or even secondary tinder, but I generally need something else to take a spark, whether it’s natural or synthetic materials. However, the Spyderco let me produce everything I needed to get a fire rolling.

When making the fire, I didn’t need a striker for the firesteel, because I was able to get big showers of sparks off the sharp corners of the Proficient’s spine. The down side, of course, is that those sharp corners get uncomfortable if you press down on them too firmly. It’s a habit I need to watch when it’s not necessary, but I’d leave the design as it is just to be able to get those sparks from a steel.

The Proficient also performed well while carving triggers for spring snares and the like, and it did just as well when shaping shelter stakes. While doing this finer work, the handle was extremely comfortable to work with and alleviated a good amount of stress from my hand. The pressure against the palm was more evenly distributed across the rounded handle. This allowed me to work much longer without having to take a break.

After the woodwork was done, the Proficient made a nice transition to other camp chores such as food prep, for which slicing is much easier with a flat-grind blade than a Scandi grind—especially where meats and larger vegetables are concerned.

At least, that’s my viewpoint. Opinions vary, and there really is no right or wrong in what each person’s preference might be. All that matters is that the tool does what you need it to do and that you’re having a good time outdoors.

THE END OF THE TRAIL

One area where Spyderco stuck with tradition was with the sheath for the Proficient. It’s a leather offering with a plastic insert at the bottom, inside the sheath. The sheath is ambidextrous with just a flip of the knife, although the sheath is a bit longer than it needs to be.

However, that length does help provide a number of lashing holes to tie off the sheath to a pack or other piece of gear. I don’t normally do that with my sheaths, but it’s nice to have this as an option in addition to the standard belt loop. It holds the Proficient snugly in place and seems to be of good quality. Only time will bear that out, but if history is an indicator, it

should be just fine.

“Proficient” is an apt name for Spyderco’s new offering for the bushcraft crowd. Rather than simply jump on the “Me, too!” bandwagon, the company decided to offer a unique entry into the marketplace. By offering top-tier materials in the construction of the knife (such as a carbon-fiber grip and CPM S90V steel), Spyderco has created a 21st-century bushcraft knife I’m sure many will appreciate and enjoy.

With an MSRP of \$489.95, the price of admission isn’t cheap, although the street price is significantly less. However, what you get with the Proficient is a knife to which you can trust your life, as well as a combination of style and aesthetics with ergonomic design and quality of construction.

It is simple, but sublime, and will serve you for a lifetime. Now, that’s the stuff of tradition. **ASG**

SOURCE

- **SPYDERCO**
- **(800) 828-1925**
- **WWW.SPYDERCO.COM**



THE GUN TO GRAB

**THE BEST
SURVIVAL GUN
DEPENDS ON THE
SITUATION—BUT
IT MIGHT NOT BE
THE ONE YOU'D
EXPECT**

TEXT AND PHOTOS BY STEVEN PAUL BARLOW

“THE TRUTH IS THAT NO ONE GUN IS BEST FOR EVERY SITUATION.”

You might have given it some thought: Which gun would you grab when the going gets rough; when your very survival might depend on making the correct choice?

Some say the best survival gun is a .22 rifle, because it's easy to shoot, ammo's cheap, and you can carry lots of it. Others extol the benefits of the AR-15, because it can be configured a number of ways, parts are readily available, it's more powerful than a rimfire, and it offers high capacity.

Still others mention no specific firearm but suggest you stick with the one that's familiar—one you can shoot well. None of these suggestions is wrong, but neither does any of them constitute the entire correct answer.

WHAT'S THE SCENARIO?

Despite conventional wisdom, the truth is that no one gun is best for every situation. Are you stranded in the wilderness? Are you trying desperately to make your way out of a city decimated by a natural disaster, with gangs of rioters and looters running rampant in the streets? Are you holed up at home after the outbreak of a pandemic, or are you on the move, chased away by rising flood waters or a fast-moving wildfire? Are you alone or defending a family or part of a small group of survivors?

Circumstances can change rapidly and dramatically. You want to be ready for any predicament. You can't entrust your survival to one gun. You need a varied and substantial personal arsenal.

DEBUNKING THE MYTHS

Unless you have unlimited funds, you have to allocate your firearms budget carefully. Don't make the mistake of thoughtlessly following these entrenched myths.

The Common Calibers Miscalculation.

It's often suggested that you should choose firearms chambered for common, widely available cartridges. During the height of the ammo shortage, however, the “common” cartridges flew off the shelves and were widely unavailable.



➤ The Williams “Ace in the Hole” base/peep sight combination and the See All Open Sight were simple survival gun enhancements to this Ruger 10/22 carbine in .22LR.



Rimfire ammo was especially difficult to find.

A gun without ammo is called a ... club. While it's good to have guns in common calibers, especially for purposes of ammo compatibility with others in your group, don't limit yourself to those. Choose a couple in some of the less-popular calibers. You might be able to trade or barter for some 10mm ammo, for example, with someone who has no need for it without a 10mm pistol.

The AR-15 Fallacy. I've heard people say, “I have my AR, so I'm ready for anything.”

As versatile as the AR-15 is, it's not always the best choice. Sometimes, you might need something more powerful or more concealable.

In addition, some states have banned these guns and high-capacity magazines. If you are forced to be on the move, simply crossing a state line could suddenly result in your arrest and the confiscation of your gun (assuming there's any semblance of authority still in place). There's nothing wrong with an AR-15, but don't make it your only option.

The Obsolete Error. Semiauto firearms have some advantages. But that doesn't make other types of firearms obsolete. Revolvers can be very effective, and lever-action or pump-action rifles can be remarkably fast.

Don't laugh, but in prolonged, extreme conditions, even primitive firearms and other weapons would not be obsolete. A hunter with a flintlock rifle needs only easily formed



lead balls and gun powder. Someone with a hunting bow doesn't even need those. When ammo is gone, and primers for reloading are scarce, you might see people reverting to old technology as a matter of necessity.

The Carry Gun Conundrum. That pocket .380 of yours is so convenient to carry, but there are too many survival scenarios in which such a gun falls short. When a terrorist with an AK-47 is 60 yards away, or when the deer you need is twice that distance, your everyday-carry choice might seem woefully insufficient.

That old adage, "A smaller gun you carry is better than a larger one you leave at home," doesn't apply here. In a crisis situation, you're not leaving that full-sized gun at home. It's loaded and going wherever you go.

The "Shotguns Can't Miss" Myth. The truth is, buckshot doesn't spread out much at across-the-room distances. You can miss with a shotgun very easily. A shotgun with only a pistol grip is especially difficult to shoot accurately, because you're not holding it at eye level—unless you want it to punch you in the face when you pull the trigger.

At distances where a "scattergun" actually scatters the shot, you're likely to get many peripheral hits that might not stop an adversary.

PERSONAL PREFERENCES

Which firearms would I suggest for a wide range of emergency and survival situations? Start with my top 10:

1 Short-barreled semiauto rifle. This could be an AK- or AR-platform gun or something different, such as a Ruger Mini Thirty. For an AR, I'd choose something that hits harder than the 5.56x45. I'd opt for one in perhaps .300 AAC Blackout or 7.62x39 Russian.

2 Hunting rifle. I'd choose a bolt-action chambered for .270 or larger. Other options I like include a Browning BLR

◀ The Ruger Mini Thirty in 7.62x39 is a good alternative to AK- or AR-platform carbines. It's weather resistant with its stainless steel metal and synthetic stock. The aperture sight is excellent, but optical sights are easily mounted, too.

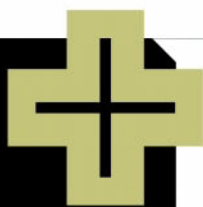


SURVIVAL GUNS: TOP FALLACIES

- 01. IT MUST BE OF COMMON, WIDELY AVAILABLE CALIBER.**
- 02. AN AR-15 IS ALWAYS THE BEST OPTION.**
- 03. ANYTHING BUT A SEMIAUTO IS OBSOLETE.**
- 04. YOUR EVERYDAY-CARRY GUN IS YOUR BEST BET.**
- 05. YOU CAN'T MISS WITH A SHOTGUN.**



UP SIDE, DOWN SIDE



In choosing guns for your emergency arsenal, consider these pros and cons:

SEMAUTO PISTOL

PROS: Concealable and fast to reload. Many feature the benefit of high-capacity magazines.

CONS: Sometimes finicky about ammo. There are better guns for long-range shooting. License often required.

REVOLVERS

PROS: Concealable, not finicky about ammo. They don't spit the empty casings everywhere. (Keep the empties to reload later.) Available in more hunting calibers. Longer-barreled models are easy to shoot at greater distances.

CONS: Slower to reload, usually contain fewer rounds fully loaded. License often required.

SHOTGUNS

PROS: Great versatility. Devastating at close range. Firing small shot, shotguns can take small game that's flying or running. You can take large game with slugs.

CONS: Limited range. Ammo is bulky and heavy.

RIFLES AND CARBINES

PROS: Better long-range capability. More power: Even moderate cartridges (.308 Winchester or .30-06 Springfield) are much more powerful than typical defensive handgun rounds. More controllable: A lever-action carbine in .44 Magnum is much easier to shoot than a .44 handgun.

CONS: Hard to conceal. Larger-caliber ammo is heavy and bulky.

"WHEN A TERRORIST WITH AN AK-47 IS 60 YARDS AWAY, OR WHEN THE DEER YOU NEED IS TWICE THAT DISTANCE, YOUR EVERYDAY-CARRY CHOICE MIGHT SEEM WOEFULLY INSUFFICIENT."



➤ Bolt-action rifles see widespread use by hunters and are still used by many sniper units. These rifles, such as this Legendary Arms Works (LAW) Professional Model in .308, are simple, rugged and reliable designs that feature superb accuracy.



lever-action in .308 or a Remington 7600 pump carbine in .30-06. If you scope any of your rifles, it's preferable to have backup iron sights, as well.

3 Pistol-caliber carbine. A semiauto or lever-action carbine in a pistol caliber is great when paired with a handgun of the same caliber. They are fast handling, can extend your effective reach, and you only have to lug around one kind of ammo.

4 Rifle in .22LR. This can keep you fed if you aren't choosy about what manner of small game is on the evening's menu. I'm fond of those rifles by Ruger, Remington and Marlin. Five pounds of .22 ammo in your pack means lots more shooting than 5 pounds of any other cartridge.

5 Short-barreled 12-gauge shotgun. Choose a semiauto or pump and an extended magazine if you can. Stockpile slugs, buckshot and number 6 shotshells, and you'll be ready for almost anything.

6 High-capacity semiauto handgun in 9mm. The 9mm is versatile and effective with the right bullets, and it's easy



➤ This Remington 870 Marine Magnum pump shotgun is all business. Other than its nickel finish and extended magazine tube, it is free of other frills and unnecessary additions.



“BETWEEN NATURAL DISASTERS AND MAN-MADE UPHEAVAL, LIFE, AS WE KNOW IT, HAS THE POTENTIAL TO UNRAVEL QUICKLY.”

to tote a good quantity of ammo. My personal preference would be toward a midsized gun that's easy to conceal, yet controllable. The Glock 19 comes to mind.

7 Semiauto handgun in .45 ACP. I would choose a .45 in addition to—not instead of—a 9mm. With both, the chance of finding ammo for at least one of them is doubled. My personal choice is an Oriskany Arms 1911. Mine has a corrosion-resistant nickel-boron finish.

8 Semiauto handgun in 10mm. Remember: I don't want to limit myself to the most common calibers. The 10mm can serve double duty for both defense and hunting. An excellent one is the Glock 40 longslide 10mm pistol with 6-inch barrel. It offers 15+1 capacity, adjustable sights and Glock's modular optics system (MOS). Mine is fitted with a Trijicon RMR reflex red-dot sight.

BEST CHOICES

STAYING PUT

Shotguns and short, handy rifles for defending home or camp.

ON THE MOVE

Short rifle or shotgun and concealable handgun; as much ammo as you can carry.

URBAN JUNGLE

High-capacity semiauto pistol with several extra magazines. You need the ability to shoot with one hand while the other is occupied.

WILDERNESS

Bolt-action rifle for long-range, big-game capability and a .22 rifle or handgun for small game.

LONG TERM

Stockpile parts; reload supplies and bullet molds, as well as ammo. Knowledge of primitive weapons is a plus.

IN A GROUP

Firearms with ammo and magazine compatibility.

ONLY ONE LONG GUN

A shotgun or midbore carbine for versatility across all potential situations.

ONLY ONE HANDGUN

In the city: a high-capacity semiauto in 9mm or .45 ACP. In the country: a .44 Magnum revolver.

➤ When you are on the move and need to travel light, your choices in firearms can be critical. You have to balance portability, effectiveness and ammo availability.



9 Revolver in either .357 or .44 Magnum.

These cartridges are both very versatile and suitable for defense with light loads and hunting at moderate ranges when loaded hotter. I prefer those with 4-inch barrels, such as the Ruger GP100 in .357 and the Smith & Wesson 629 Mountain Gun in .44. If I couldn't also have a rifle, my choice would probably be my scoped single-action Ruger Super Blackhawk Hunter in .44 with 7 3/8-inch barrel.

10 Handgun in .22LR. When you consider its effectiveness on small game and how much ammo you can carry for it, a .22 handgun is still a good choice. I like my Ruger Single Six with cylinders for both .22LR and .22WMR. Semiautos from Browning, Ruger and Smith & Wesson would also be good choices.

PRACTICE AND PREPARE

Are there other factors to consider? Of course. Would some of your choices for survival guns have been different? Undoubtedly. This is one of the longest-running debates among firearms enthusiasts.

One thing is for sure: Between natural disasters and man-made upheaval, life, as we know it, has the potential to unravel quickly. You need to be ready. Acquire a variety of firearms if you can. Don't rely on one gun or one caliber. Don't wait until a crisis arises to buy ammo. Practice with your guns, and make sure everyone in your family does the same. **ASG**



DRINK FROM THE SOURCE
WITH THE **AWARD WINNING**
LIFESTRAW WATER FILTER

1.888.451.6752 | LIFESTRAW.COM

LifeStraw®
PERSONAL WATER FILTER

- > Filters 264 gallons (1,000 liters)
- > Removes 99.9999% bacteria
- > Removes 99.9% protozoa
- > Weighs only 2oz.



ALL ABOUT ZIKA VIRUS

THERE IS NO KNOWN EFFECTIVE TREATMENT FOR THIS LATEST PANDEMIC, SO IT'S ESPECIALLY IMPORTANT TO FIGURE OUT A STRATEGY FOR PREVENTION

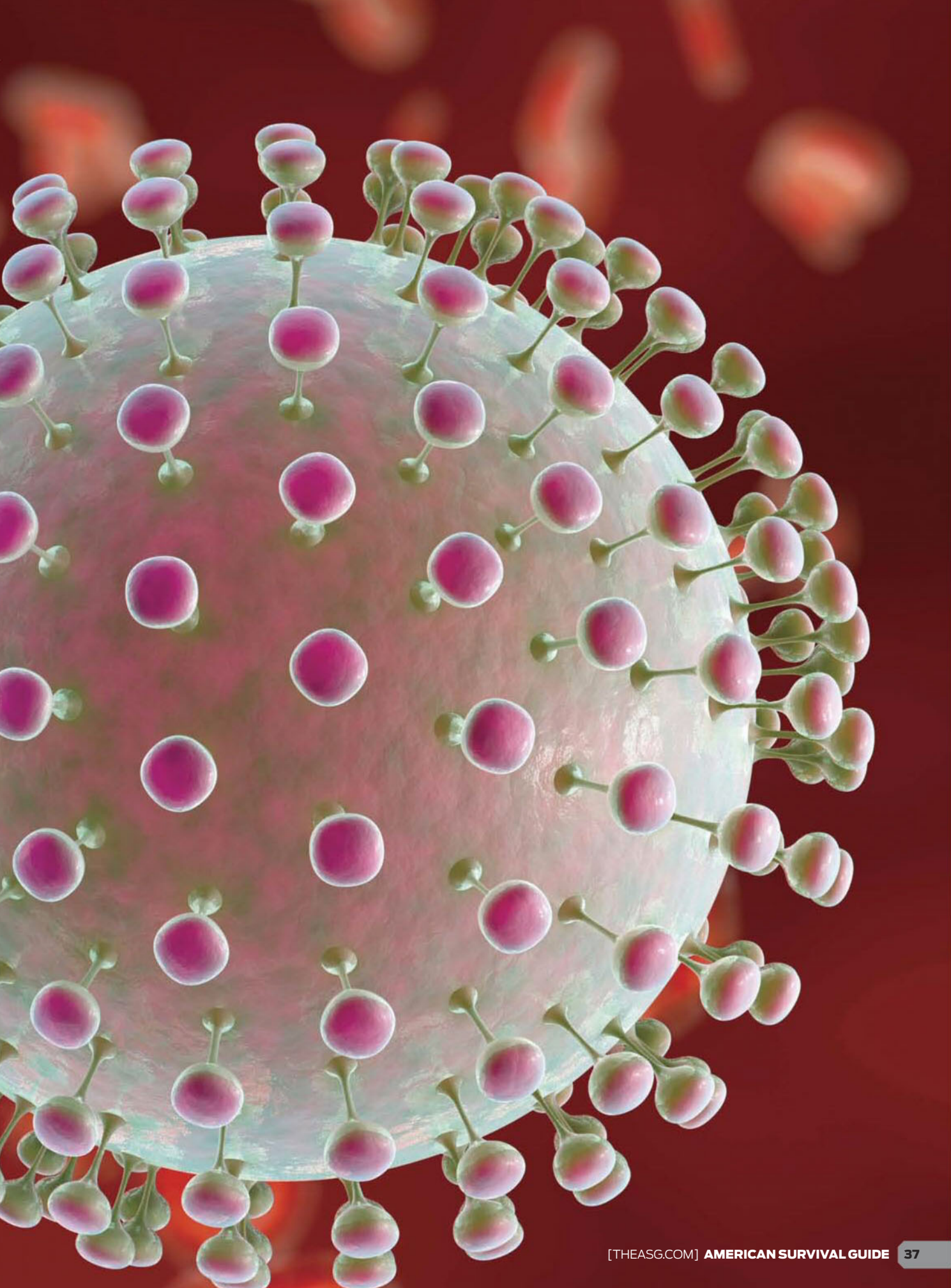
BY JOE ALTON, M.D., AUTHOR, *THE ZIKA VIRUS HANDBOOK*

In today's high-tech world, we have seen success in the treatment and prevention of many infectious diseases. Although we can cure many bacterial illnesses with antibiotics, we are still struggling with outbreaks caused by viruses.

In 2014, thousands died in West Africa during the Ebola epidemic. In 2015, chikungunya virus crossed the Atlantic into the Western Hemisphere and infected up to two million people. Now, it's Zika virus's turn.

Zika virus (ZIKV) isn't life threatening but is related, in ways not yet known, to striking birth deformities in newborns. In other cases, it is associated with nerve damage and paralysis.

By affecting various regions throughout the world, Zika virus has become the latest pandemic. It is the first to generate travel warnings specifically for women who are pregnant or of childbearing age. Previously unknown to citizens of the Americas, it might affect up to four million people and possibly be the cause of many babies born with lifelong disabilities, according to the World Health Organization.



WHAT IS ZIKA VIRUS?

Zika virus (ZIKV) is a member of the flavivirus family, which contains a number of well-known diseases such as yellow fever, chikungunya, dengue fever and West Nile virus. Zika is named after the Zika Forest of Uganda near Lake Victoria, where the virus was first identified in 1947 in a rhesus macaque monkey.

In the 1950s, the single-stranded RNA virus was first found in humans. Initially, isolated cases were found, but since 2007, outbreaks have occurred in Africa, India, Southeast Asia and the Polynesian Islands. Studies in these areas found that a widespread population carried antibodies against the virus, which suggests that it has existed, unidentified, for a much longer time.

There appear to be two strains of ZIKV—one from Africa and one from Asia. It has been hypothesized that the Asian version traveled with mosquitoes that followed international visitors to the 2014 World Cup in Rio de Janeiro, Brazil, and other cities. An outbreak in the Polynesian Islands in 2014 may have served as a way station.

Populations in the New World have developed little immunity to ZIKV, so it affects the entire population, not just the old and infirm.

◀ *Aedes aegypti* mosquito, the species that transmits the dengue virus, chikungunya fever and Zika. (Photo by William Volcov/ Brazil Photo Press/ LatinContent@ Getty Images)

“... ‘WHAT IS THE MOST DANGEROUS ANIMAL ON THE PLANET?’ YOU MIGHT THINK OF THE GREAT WHITE SHARK, A CROCODILE OR TIGER. YOU’D BE WRONG ... IT’S THE MOSQUITO.”

SIGNS AND SYMPTOMS OF ACUTE ZIKV

For a disease with heartbreaking consequences for newborns, Zika virus is a relatively mild illness when a person is first infected. After being bitten by a mosquito, there is a period of time during which there are no symptoms. This is called the “incubation period.” Although the exact incubation period of Zika is not known for certain, it is thought to be several days to a week or more.

The most common symptoms of Zika are fever, headaches, fatigue and a patchy rash. The rash starts in the face and moves down the body. Many victims also experience joint or muscle pain and some even develop conjunctivitis (also known as “pink eye”). Occasionally, there have been reports of diarrhea or other bowel disturbances.

Few of these symptoms require hospitalization, and deaths are very rare. After a few days to a week, the patient recovers.

It should be noted that there are no symptoms whatsoever in the great majority (80 percent) of those infected. Although this underscores the mild nature of the acute illness, the lack of signs could be ominous for a pregnant woman: She won’t know she had the infection until ultrasound results reveal abnormal fetal development.

HOW DOES ZIKA VIRUS SPREAD?

Zika virus is one of many infectious diseases transmitted from the bites of mosquitoes. A species that can pass a pathogen (disease-causing organism) to humans is called a “vector.” Mosquitoes serve that purpose for many diseases, such as malaria. The *Aedes* family of mosquitoes, in particular, has been singled out as the most likely vector of the Zika virus.

The equatorial countries in which Zika was first found have some factors in common: warm weather; large areas of stagnant, standing water; large mosquito populations; and poor sanitation.

With commercial air travel so freely available, it makes sense that the *Aedes* mosquito could easily hitchhike its way to the Western Hemisphere. Once it arrives there, many countries (such as Brazil) offer a welcoming environment for the mosquito to thrive. Some of these mosquitoes carry the Zika virus to a population with little immunity against it.

Despite this, it wasn’t until May 2015 that Zika cases started showing up in South America. Spread was rapid, and now, the virus can be found in just about every country in the hemisphere. If an *Aedes* mosquito can survive in an area, it can carry and transmit ZIKV there.

Although mosquito-borne transmission is, by far, the most common way to contract



GETTY IMAGES.COM/BY VICTOR MORIYAMA

Zika virus, cases of transmission from human to human through sexual contact have been reported. As a result of this case and a number of others, the United States has issued a warning and some specific recommendations for men traveling from Zika-affected areas. If a man has a pregnant partner, he should either abstain from sex or use condoms until the end of his partner's pregnancy.

The most serious human transmission is from mother to fetus, and this is the method that causes the most concern. Zika has been found in the amniotic fluid of a number of pregnancies, proving that the virus can pass through the placenta. No reports of Zika being passed through breastfeeding currently exist, however.

THE AEDES MOSQUITO

If you were asked, "What is the most dangerous animal on the planet?" you might think of the great white shark, a crocodile or tiger. You'd be wrong ... it's the mosquito.

There are more than 3,500 species of mosquitoes on the planet, and many of them have a beneficial effect on the environment, such as pollinating certain plants and serving as a food source for birds, fish and other small animals. The United States, alone, has 176 species.

A number of species are truly dangerous,

"PREVIOUSLY UNKNOWN TO CITIZENS OF THE AMERICAS, IT MIGHT AFFECT UP TO FOUR MILLION PEOPLE AND POSSIBLY BE THE CAUSE OF MANY BABIES BORN WITH LIFELONG DISABILITIES ..."



◀ A health agent performs the collection and analysis of larvae of the mosquito *Aedes aegypti* found in pots and plants in the Butanta residential neighborhood on January 29, 2016, in São Paulo, Brazil. According to the city's department of health, São Paulo has not yet submitted cases of microcephaly associated with mosquito bites. Since October, Brazil has recorded 3,893 suspected cases of the birth defect—which can lead to stillbirths, as well as long-lasting developmental and health problems among survivors. (Photos: Victor Moriyama/Getty Images)

GETTYIMAGES.COM/BY MARIO TAMA

however, such as the *Anopheles* mosquito that transmits malaria (which is caused by a parasite called plasmodia). Malaria causes millions of deaths every year in underdeveloped tropical countries.

Aedes aegypti is the species most known to transmit the Zika virus in Africa and Asia. They originally made their home in tropical and subtropical zones. Now, however, they can be found everywhere in the world, except for Antarctica. Most species can be identified by a pattern of white and black body markings.

Most mosquitoes prefer to bite at dawn and dusk, but the *Aedes* species is an aggressive biter all day long. They feed less often at night. These insects prefer shady areas to rest and might even live indoors, but they can handle prolonged exposure to the sun—if human hosts are available.

Mosquitoes generally feed on sugars, but the female *Aedes* mosquito must have a blood meal to develop its eggs and reproduce. Therefore, only the female has any need to bite humans.

AEDES LIFE CYCLE

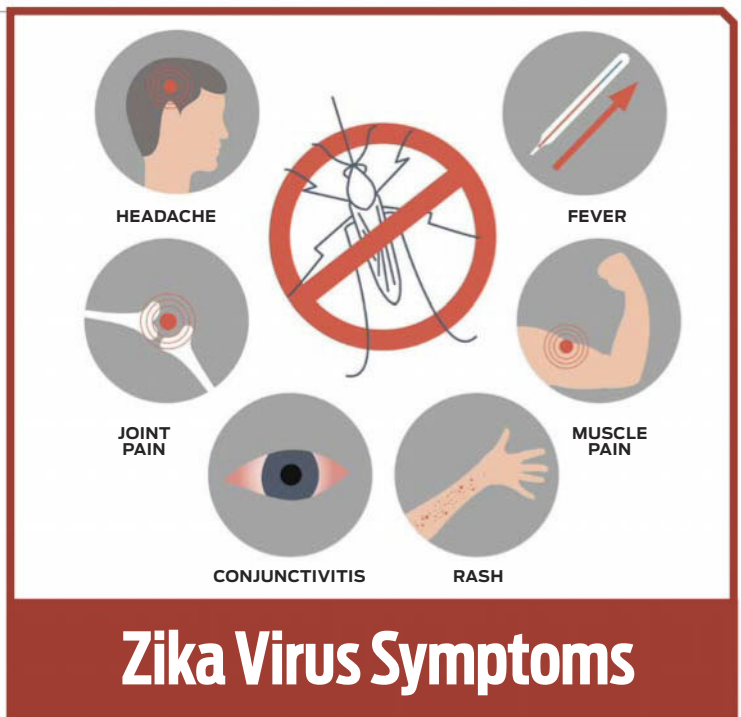
The life cycle of *Aedes aegypti*, as for other mosquitoes, shows dramatic changes in habitat and shape. Females lay their eggs on moist surfaces above the waterline on plants but might even utilize the inner walls of flower vases or discarded jars. They produce about 100 eggs at a time. These eggs are very hardy. They remain stuck to the surface like glue and can survive up to a year, even if dry. This gets them through winters in temperate climates.

Once the eggs are covered with water from rainfall (or by humans), they hatch. The worm-like juveniles (known as "larvae") look nothing like the adult. They feed on microbes and organic matter.

Larvae must go through several stages called "instars," where they molt (shed their skins) as they grow. Although the larvae live in water, they need air to breathe. They come up to the surface from time to time to take in a supply through siphons in the backs of their bodies.

Once the larvae reach the fourth instar, they become a "pupa." During this stage, the body floats on the surface and breathes through tubes called "trumpets." Over one to four days, it changes into a fully formed adult mosquito. The whole process from egg to adult happens in eight to 10 days at warm temperatures.

› Zika virus infographics with transmission, symptoms and complications



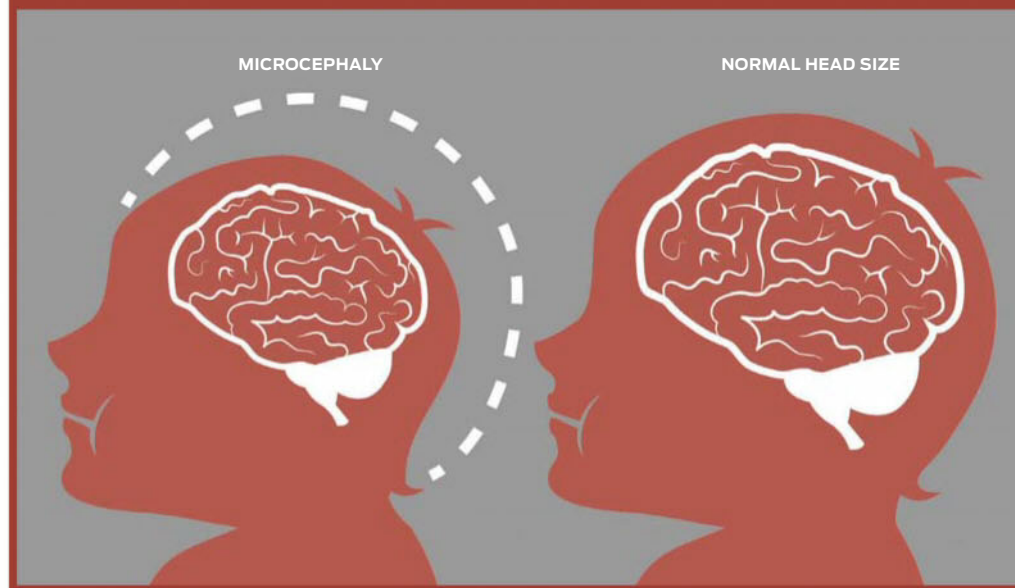
COMPLICATIONS OF ZIKA VIRUS

Zika virus isn't very impressive as an acute illness, but its complications can be severe. Mostly related to the nervous system, ZIKV is associated with Guillain-Barre syndrome, through which the body's immune system attacks the protective coverings of its own nerve cells (the "myelin sheaths").

Zika Virus has made the news mostly due to its possible effect on certain newborns. In thousands of cases in Brazil, babies are being born with small heads and correspondingly small brains. "Microcephaly" is normally defined as head measurements more than two standard deviations below the mean for age and sex. This correlates to the 2nd or 3rd percentile—that is, a smaller head than 97 to 98 percent of newborns.

Newborns might appear relatively normal at first but could develop a striking appearance as they grow. The

Zika Virus Complications



◀ Agents working with pesticide fogging to combat the larvae of *Aedes aegypti* in the Butanta neighborhood. The site presents cases of mosquito bite of the Zika virus in residents on January 29, 2016, in Sao Paulo, Brazil. (Photos: Victor Moriyama/Getty Images)

child's face continues to develop, but the cranium (the part of the skull that contains the brain) doesn't. This leads to a strikingly abnormal appearance, and often, a number of mental and physical handicaps.

TREATMENT AND PREVENTION

As with many other viral infections, there is no known effective treatment for ZIKV. Neither has a vaccine been developed yet that can prevent the disease or its effects. Therefore, it's especially important to figure out a strategy for prevention.

If you must travel to countries in which Zika virus outbreaks are occurring, take the following steps:

- ◀ Wear long-sleeved shirts and long pants. Tuck shirts into pants and pants into socks.
- ◀ Consider applying a pesticide called Permethrin to clothes; when applied correctly, it will withstand a laundering or two.
- ◀ Stay in places with air conditioning—or at least window and door screening.
- ◀ Sleep under a mosquito net if you must be outside.
- ◀ Use an EPA-recommended insect repellent such as DEET, Picaridin, IR3535 or lemon eucalyptus oil. Citronella oil may be useful, as well. Re-apply frequently on skin and clothes.



➤ There is still no vaccine for ZIKV. (Photo: Henrik Dolle/Getty Images)



◀ A pregnant woman infected by the Zika virus is attended at the Erasmo Meoz University Hospital in Cucuta, Colombia, on January 25, 2016. (Photo: Schneyder Mendoza/AFP/Getty Images)

➤ A young girl plays with her 2-months-old baby brother, who has microcephaly, in Recife, Pernambuco state, Brazil, on February 3, 2016. The state with the most cases is Pernambuco, which is being called the epicenter of the outbreak. (Photo: Mario Tama/Getty Images)

Aedes mosquitoes are now entrenched in the United States, and we can expect local transmission of Zika cases here this summer. Prevention involves mosquito control measures; decreasing the number of mosquitoes around your retreat will decrease the chance of anyone passing on the Zika virus. A method that eliminates both adult and juvenile mosquitoes (larvae) is called “source reduction.” This is a type of environmental management that involves removing breeding habitat. If ZIKV cases are reported in your hometown, you will have to take aggressive measures. Consider taking the following precautionary steps:



- ◀ Cover rain barrels with a screen or other barrier.
- ◀ Keep lids on garbage cans.
- ◀ Strictly maintain chlorine or salt levels in swimming pools or hot tubs. Drain kiddie pools when not in use. Abandoned swimming pools should be filled in with dirt or sand.
- ◀ Drain water from tarps, pool covers or other protective sheeting.
- ◀ Remove buckets, flower pots and other containers that might accumulate water.
- ◀ Change water frequently in birdbaths, pet dishes and animal troughs.
- ◀ Unclog rain gutters that might not be draining well.
- ◀ Repair any leaky outdoor faucets.
- ◀ Install or repair tightly fitting window and door screens. Use U.S. #16 or #18 mesh.
- ◀ Remove debris from ornamental ponds or fountains that might prevent water circulation.
- ◀ Cut or mow areas of tall grass—a favorite place for adult mosquitoes to loiter.
- ◀ Avoid excessive watering of lawns and plants, especially near the house.
- ◀ Add topsoil to uneven areas of your yard that might accumulate rain water. In normal times, municipalities will set

mosquito traps, spray insecticides (such as organophosphates) or cover standing water with special films that suffocate larvae. Some communities release mosquito predators such as gambusia, a tiny fish that feeds on larvae.

A British company has even developed a genetically modified male mosquito called OX513A. When released into an area, this mosquito competes with “normal” males for mating privileges. Its genetic code has been altered so that its offspring cannot survive to maturity, thereby decreasing the mosquito population.

Epidemics, and even pandemics, come and go. Those that affect future generations—such as the Zika virus—will require special vigilance to prevent their spread. **ASG**



◀ A Cambodian woman holds a baby as a health official (inside the house) uses an aspirator to collect mosquitoes in an effort to stem any outbreak of the Zika virus in Phnom Penh on February 4, 2016. Cambodian health officials have been monitoring the Zika virus, although the country has not seen any cases so far. (Photo: Tang Chin Sothy/AFP/Getty Images)



GETTYIMAGES.COM/BY:ORLANDO SIERRA



UPDATED CLASSICS

THREE NEW TAKES ON CLASSIC KNIFE DESIGNS

BY KEVIN ESTELA

As a general rule, don't mess with a classic.

The original 1984 *Red Dawn* movie should have been left as is, because the updated, politically correct 2012 version cannot compare to the "run for the hills" flavor of the first. Anytime a revered classic is revisited, there is always the chance it won't be well received.

There is a lot of history with the first, and it is hard to win over loyal fans with something different. This risk is not exclusive to movies; it also applies to blades.

Occasionally, a knifemaker takes a chance redesigning a classic with differences in edge geometry, the steel used, or its profile and shape.

Recently, I was able to track down three updated classics from three very different genres of cutlery. How these modern classics perform compared to the proven track record of their predecessors demonstrates that it is possible to improve upon something good. These three new designs were worth the risk.



ED MARTIN KNIVES BUSHCRAFT CLASSIC 2.0

“... ED MARTIN HAS RECENTLY TAKEN THE PROVEN WOODLORE PATTERN AND UPDATED IT FOR THE 21ST CENTURY.”

If you fancy yourself a bushcrafter, you know the Woodlore knife. Designed by renowned British wilderness sage Ray Mears, the classic lines of the Woodlore are easily recognizable in traditional skills circles. Originally offered in O1 steel, the Woodlore featured a natural material (wood or bone) handle and came with a

› The Ed Martin Knives Bushcraft 2.0 sheath is modular, allowing for a range of carry options. It is equipped with a diamond hone and fire steel.



› The Ed Martin Knives Bushcraft 2.0 features a tapered tang that greatly reduces the weight of the blade without compromising strength.



› The author's Steven Wade Cox (SWC) Woodlore kit knife, finished by Greg Haugh, and the new Bushcraft Classic 2.0 by Ed Martin Knives



leather sheath. This knife shape has been the inspiration for countless variations since it was first conceived in the 1980s. Original Woodlore knives are quite collectible and expensive.

Martin Knives' Ed Martin has recently taken the proven Woodlore pattern and updated it for the 21st century. His BC 2.0 knife departs from traditional tool steel and natural handle materials to utilize S35VN stainless steel for the blade and micarta for the handle.

When asked about using synthetic materials for the handle scales, Martin remarked, "I have had trouble with shrinkage with most of them (wood-handled knives), and even the buffalo horn bolsters on one were partially eaten by silverfish. This is why I believe a good phenolic, man-made material such as micarta, G10 or carbon fiber is the way to go. When you buy a custom knife, you are paying quite a bit more, and you don't want the handles cracking and loosening on you."

For those familiar with Martin's previous Bushcraft Classic design, the BC 2.0 features a more European-styled handle with direct inspiration from an original Woodlore pattern. The BC 2.0 features a true Scandinavian grind perfectly suited for wood work, and the combination of materials used makes maintenance easy in damp environments.

I compared the BC 2.0 to a Steven Wade Cox (SWC) Woodlore kit knife and found the S35VN steel to be significantly tougher than standard 01. What left minor surface scratches on the polished flat of the 01 did not register any marks on the S35VN. In hand, both knives were extremely comfortable, given their "Coke bottle" contour. Aside from the warmth wooden handles provide, the feel of the contours in hand is essentially the same. It is a familiarity the Woodlore fan will appreciate.

As with some of the Woodlores before, Martin has incorporated a tapered tang in the handle of the BC 2.0 that reduces the weight of the blade significantly and moves the balance point of the knife slightly behind the forward bolt. This makes using the knife for extended periods of time less fatiguing than slightly heavier blades.

When asked about this, he explained, "I had not done tapered tangs in a long time, so I had to refamiliarize myself. But I got it right the first time ... kind of like riding a bicycle, I guess."

After making wood shavings, splitting pieces of wood sawed into rounds and using the S35VN steel at length around the fire, I found simple stones took too long to bring the edge back up. A good diamond hone, such as an EZ Lap flat stone, fits in the modular pouch sheath—an option from Martin—and more easily transforms the much harder steel than a standard Arkansas stone could.

Speaking of the sheath, the BC 2.0 has many options for carry, including ride height and accessories carried. According to Martin, "It is ambidextrous and allows horizontal or vertical carry. All that is needed to change it around from front to back carry is a small Allen wrench ... You will also need to put some Loctite on the screws once you decide which position suits you best to keep the screws from backing out over time."

The sheath has provisions to hold a firesteel, as well as sharpening stone, and the attachment strap can be loaded with compound and used as a strop. During testing, the Ed Martin Bushcraft 2.0 was carried on the belt, on a canteen shoulder strap and tucked nearly horizontal under the arm under a heavy jacket. Never once did the knife wiggle free from the sheath or release, unless it was deliberately drawn.

SPECIFICATIONS

BUSHCRAFT CLASSIC 2.0

- › **MANUFACTURER:** Ed Martin Knives
- › **STEEL:** 01 steel (S35VN as tested)
- › **OVERALL LENGTH:** Approximately 8.5 inches
- › **HANDLE LENGTH:** 4.5 inches
- › **BLADE LENGTH:** 3⁷/₈ inches (as tested) or 4¹/₄ inches
- › **BLADE THICKNESS:** 1/₈ inch or 3/₁₆ inch
- › **WEIGHT:** 5 to 6 ounces, depending on blade configuration/options
- › **HANDLE MATERIAL:** Micarta
- › **SHEATH:** Leather, modular design
- › **MSRP:** \$255



SOURCE

- › **ED MARTIN KNIVES**
(903) 268-7013
- › WWW.MARTINKNIVES.COM/EDSKNIVES.HTML

RMJ TACTICAL KHUKURI

Many knives can be considered “survival knives,” but one shape resonates in wilderness survival and zombie apocalypse circles—the khukuri.

Geographically, this reverse-curve knife originates in Nepal, a land that is home to extremely harsh weather, resilient people and fierce fighters, the Gurkhas. The khukuri bridges the gap between tool and weapon and comes in sizes meant for pocket carry all the way up to one for ceremonial beheadings of cattle.

Its unique design, capable of being traced back to the ancient Greek Kopis, makes the blade perfect for chopping and slicing cuts. Unfortunately, steel quality varies, and although some khukuris are exceptionally made, many are poorly

› The RMJ Khukuri comes with a heavy-duty MOLLE-compatible leather sheath.

› Below: The RMJ Tactical Khukuri and, below it, a traditionally made Nepalese Khukuri

constructed and finished and sold as the genuine article.

In 2015, RMJ Tactical, known for making hard-use tomahawks, debuted its version of the Khukuri at the BLADE show in Atlanta, Georgia. The knife caused a fury of excitement, and those who handled it (including me) knew it would be revolutionary.

The design of the blade actually dates back to more than 10 years ago. The 80CRV2 blade is coated in the same manner as RMJ’s popular tomahawks, and the VZ Grips-manufactured handle is attached with 304 stainless tubing set in place with a 4-ton press. Underneath the “bear paw-sized” handle is a pocketed handle that has a thin web instead of a skeletonized design to reduce weight but maximize strength. Calling this knife “tough” is an understatement.

After months of waiting, the RMJ Khukuris started to ship, and I received my sample. Not very long afterward, I ran the RMJ Khukuri through its paces.

As a chopping blade, the RMJ Khukuri curvature maximizes cutting performance by



ensuring the edge contacts the medium cut at an angle. The blade has a continuous swoop to it, and the profile of the knife reveals that it is tapered on the spine and edge (much like an airplane wing) to reduce the drag profile with an aerodynamic shape. The only straight lines on the knife are the machining marks to reduce drag.

According to RMJ Tactical owner Ryan Johnson in a video posted to his company's Facebook page, the fuller in the blade serves three purposes to reduce weight, provide stiffness and simply because "it's sexy"; and sexy is a legitimate purpose. The size of the RMJ Khukuri is meant to be reasonable and stay within the usable dimensions without venturing into the "toy" category of a novelty-sized knife.

The knife powered through saplings in downward and upward swinging motions, in part due to the weight of the blade and unique grind. Because RMJ Tactical is known for providing tools perfectly at home on the battlefield as much as in the woods, I used its khukuri to cut through 2x4s, 4x4s, cardboard tubes and various tubing and hose. As an unorthodox test, I used it to open green coconuts. The blade was very controllable, and I could carefully trim down the green husk.

Compared to a higher-end authentic khukuri used in this side-by-side review, the RMJ Khukuri has a thinner blade and straight-profile handle slabs. The aggressive checkering in the grip compensates for the traditional swell toward the butt of the handle. A forward lanyard was added and used when this knife was really taken to task. The performance was impressive, and this knife held its own against seasoned hardwood rounds and split quarters.

The RMJ Khukuri comes with a leather or Kydex sheath, incorporating a different design than the traditional wooden sheath most Nepalese khukuris have been provided with. The RMJ sheath has an open front, allowing a "break-away"-style draw when worn on the right side of the body and presented forward.

The belt loop is actually two MOLLE-compatible straps; the bottom of the sheath has two polymer "D" rings that allow it to be strapped down more securely to the outside of a pack or to your leg, if you choose to belt-carry it.



SPECIFICATIONS	
KHUKURI	
› MANUFACTURER:	RMJ Tactical
› STEEL:	80CRV2
› OVERALL LENGTH:	16 inches
› HANDLE LENGTH:	5.5 inches
› BLADE LENGTH:	10.5 inches
› BLADE THICKNESS:	.25 inch
› WEIGHT:	21.75 ounces
› HANDLE MATERIAL:	G10
› SHEATH:	MOLLE-compatible leather
› MSRP:	\$450



SOURCE

- › RMJ TACTICAL
(866) 779-6922
- › WWW.RMJTACTICAL.COM

VEHEMENT KNIVES COMBAT DAGGER

› The Vehement Knives Combat Dagger next to an original Fairbairn-Sykes Dagger made by Sheffield Knives



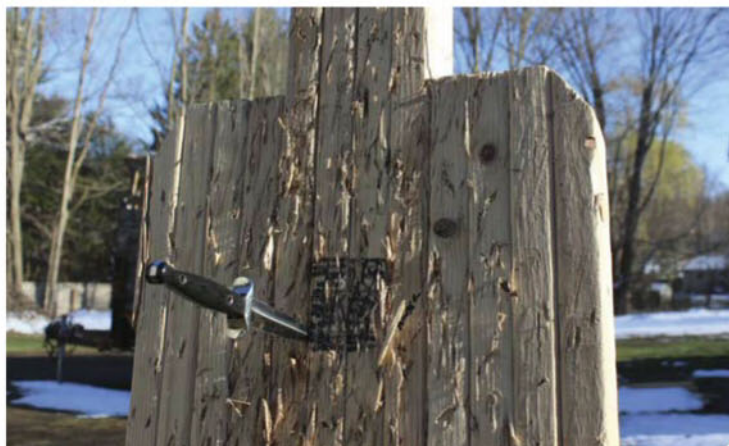
› The Vehement Knives Combat Dagger is supplied with a heavyweight leather sheath and a split belt loop meant for MOLLE attachment.

When the British Special Air Service (SAS) commandos needed a fighting knife, they enlisted the help of William Fairbairn and Eric Sykes. These two men studied the knife attack crimes in Shanghai and documented the bloody aftermath of thrusts and slashes, along with average bleed-out times from actual cases. Both Fairbairn and Sykes pooled their collective experience to design a knife for surprise attacks and combatives when blades should be felt, not seen.

The FS Dagger has a distinct design easily recognizable by those afforded the chance and circumstances to see it.

Given the fame of the “commando dagger,” countless companies have tried to reproduce it—and failed. The blade on most is attached through the handle with a stick tang. Lateral pressure on the blade caused many imitations to break. Thrusting, after all, was deemed highly effective in terms of “anti-personnel” movements, and this didn’t pose much of a threat to the integrity of the blade.

With an affinity for World War II-era knives, Vehement Knives created its own version—the Combat Dagger—and addressed the



› The author used the Combat Dagger from a quick-draw position for numerous repetitions against a wooden target.



SPECIFICATIONS

COMBAT DAGGER

> **MANUFACTURER:** Vehement Knives

> **STEEL:** ATS-34

> **OVERALL LENGTH:** 11 inches

> **HANDLE LENGTH:** 5 inches

> **BLADE LENGTH:** 6 inches

> **BLADE THICKNESS:** 3/16 inch

> **WEIGHT:** 6.9 ounces

> **HANDLE MATERIAL:** Micarta

> **SHEATH:** Leather, ambidextrous

> **MSRP:** \$405

structural integrity issue by making it with a more substantial full-exposed tang.

Vehement's Matt Martin assured me in a recent interview that I didn't have to worry about breaking his knife during my review: "There were obvious shortcomings in the original design, and we were able to tackle them by viewing them through the eyes of contemporary standards."

There is no doubt about it: The new Combat Dagger has a much more rugged feel than its predecessor while only weighing 6.9 ounces (compared to the original 8.35 ounces).

Testing the Vehement Knives Combat Dagger meant testing it under the conditions for which it was meant. Because the majority of attacks prescribed by Fairbairn and Sykes were thrusts, I wanted to test the thrust capability of the blade. Skin has a very low tensile strength, and living bone can be pierced more readily than dry bone. Cardboard and watermelon rind are good substitutes because of their similar tensile strength—but they are hardly a challenge. In testing this knife, I used it through various clothing items placed over a body opponent bag (BOB) target with leather and buckskin layered over it. The Vehement Knives Combat Dagger penetrated straight through even the heaviest of garments acquired at the local thrift store.

While most daggers lack the forward mass necessary for good chopping, they can still effectively slash. In testing, I attached a patch of buckskin to a training dummy and slashed clean through the shirt and through the buckskin. The Combat Dagger worked as designed. The strongest of thrusts penetrated through multiple layers of heavy, 9- or 10-ounce leather. The balance of the blade is just behind the guard, and the dagger is extremely comfortable in common combative grips (foil, sabre, reverse, etc.)

The original FS knife came with a couple of different sheaths meant to be sewn into a soldier's clothing or worn on web gear. The Vehement Knives Combat Dagger sheath is made from high-quality leather. Because boot carry is impractical for most, I wore the leather sheath on a chest rig from Eagle Industries. I also used it tucked into my waistband, handle forward, appendix carry left of my centerline. In this position, the blade is easily accessed from the right and left side of the body and can be presented on the target quickly with efficiency of motion. Worn in conjunction with a handgun on the belt, a survivor has a potent defensive/offensive setup to address 21st-century needs.

According to Matt Martin, "There's something about a well-executed dagger that can put a grin on any man's face."

After handling the Vehement Knives Combat dagger, I couldn't agree more. It is finished like a collector's piece, built to be carried and trusted if meant to be used. Pick one up and "live vehemently!"



The Vehement Knives Combat Dagger cut cleanly through heavy buckskin placed against a body opponent bag.

SOURCE

> **VEHEMENT KNIVES**

(303) 651-2402

> WWW.VEHEMENTKNIVES.COM



➤ *Above left:* The author used the RMJ Tactical Khukuri for many tasks while evaluating it. In addition to chopping hardwood, he used the belly of the blade to open green coconuts and used the tip to remove the edible meat.



➤ *Above right:* The Combat Dagger easily penetrated through multiple layers of leather. If a wooden backer were not used, the dagger would have penetrated deeper.

BALLISTOL— SINCE 1904

Created in 1904, Ballistol has stood the test of time. Just as effective today as it was more than a 100 years ago, there are few products as universal to cleaning and protecting metal, wood and leather. If given the choice of only one protectant to carry, Ballistol is mine.

It contains no ingredients deemed harmful by OSHA, nor is it carcinogenic. It biodegrades in two years and is safe on human skin. Recently, Ballistol National Sales Manager Patrick Palumbo provided the following information about why this product can be used so broadly.

ON WOOD

Originally designed to protect oil-finished wooden stocks, Ballistol still works today on all finished and unfinished wood surfaces. Ballistol maintains, protects, preserves and rejuvenates unpainted wooden surfaces. It regenerates natural wood, brings out the wood grain and helps old, dry, dull wood regain its natural silky glow. Ballistol also protects wood against damage resulting from humidity and insects.

ON METAL (KNIVES AND FIREARMS)

Ballistol leaves a protective film on metal surfaces, keeping them slick and corrosion free. It is an outstanding penetrating oil, seeping into the finest cracks and loosening nuts and bolts.

It can also be used as a cutting/boring oil. Most corrosion-inhibiting lubricants can only protect against normal oxidation. They do so by covering up the surface, which they are supposed to protect, and prevent contact with water and air. Due to its alkalinity, Ballistol can also protect against galvanic corrosion, acidic corrosion and salt water corrosion.

ON LEATHER

Designed 112 year ago to condition and waterproof leather, Ballistol is still an excellent option for leather care. Leather

that is frequently exposed to moisture or high humidity will become hard and brittle if not treated correctly. Ballistol will keep all smooth leather soft and protect leather against the effects of water, insects and mold. Use Ballistol on boots, shoes, gloves, holsters, slings, saddles and other leather products.

If properly processed, leather will contain acidic residues from tannic acid. Ballistol will form a permanent chemical compound with these residues within the leather that will make the leather virtually impermeable to water. Corrosion might develop in the areas where handguns or knives have direct contact with leather. By treating the inside of the holster with Ballistol, the acidic residues from tannic acid will be completely neutralized, and this source of corrosion will be eliminated.

AS A FIRESTARTER

In a pinch, Ballistol can be used as a firestarter. Using one of the small "single-serving" packets, make a small tear and remove a piece of the Ballistol fabric. The foil in the packet prevents the "wick" from burning too quickly. The packet will burn long enough to get a small fire going. **ASG**





◀ The author used the Ed Martin Bushcraft 2.0 for many tasks while evaluating it for this article. Feather stick carving, scraping bark for tinder fluff and sparking ferro rods were all practical tests of the knife's capability.

“MANY KNIVES CAN BE CONSIDERED ‘SURVIVAL KNIVES,’ BUT ONE SHAPE RESONATES IN WILDERNESS SURVIVAL AND ZOMBIE APOCALYPSE CIRCLES—THE KHUKURI.”



ONTARIO KNIFE COMPANY

Franklinville, New York. Since 1889

**THE KNIFE
YOU NEED
WHEN YOU
NEED A KNIFE®**

Visit us at www.ontarioknife.com

[www.Facebook.com/ontarioknife](https://www.facebook.com/ontarioknife)





Achieve the highest level of Amateur Radio licensing!

The ARRL Extra Class License Manual is your ticket to every privilege granted to Amateur Radio Operators. When you upgrade to Extra Class, you gain access to the entire Amateur Radio frequency spectrum. Use this book to ace the top-level ham radio licensing exam. Our expert instruction will lead you through all of the knowledge you need to pass the exam: rules, specific operating skills and more advanced electronics theory.



The Extra Class license is the highest of all three Amateur Radio licenses. To upgrade to Extra Class you must already hold a General Class license (or have recently passed all of the exams required for a General Class license). Upgrading to an Extra Class license requires passing a written examination. As an Extra Class licensee, you will have full privileges on all frequencies authorized by the FCC for Amateur Radio.

Use this book to study for your Extra Class (Element 4) license exam. Every chapter contains information you will need to pass the exam and become an effective operator. Study in small sections at a time:

- Radio Regulations
- Radio Signals and Measurements
- Radio Modes and Equipment
- Antennas and Feed Lines
- Topics in Radio Propagation
- Safety

You'll find the entire Extra Question Pool. Practice Exams. Use this book with ARRL Exam Review for Ham Radio chapter by chapter. Take randomly generated practice exams using examination question pool. You won't have any surprises on exam day! Reference for all of your advanced technical and operating activities.

Published by: The national association for
ARRL AMATEUR RADIO
www.arrl.org
225 Main Street, Newington, CT 06111-1494



The ARRL
Extra Class License Manual



Tenth Edition

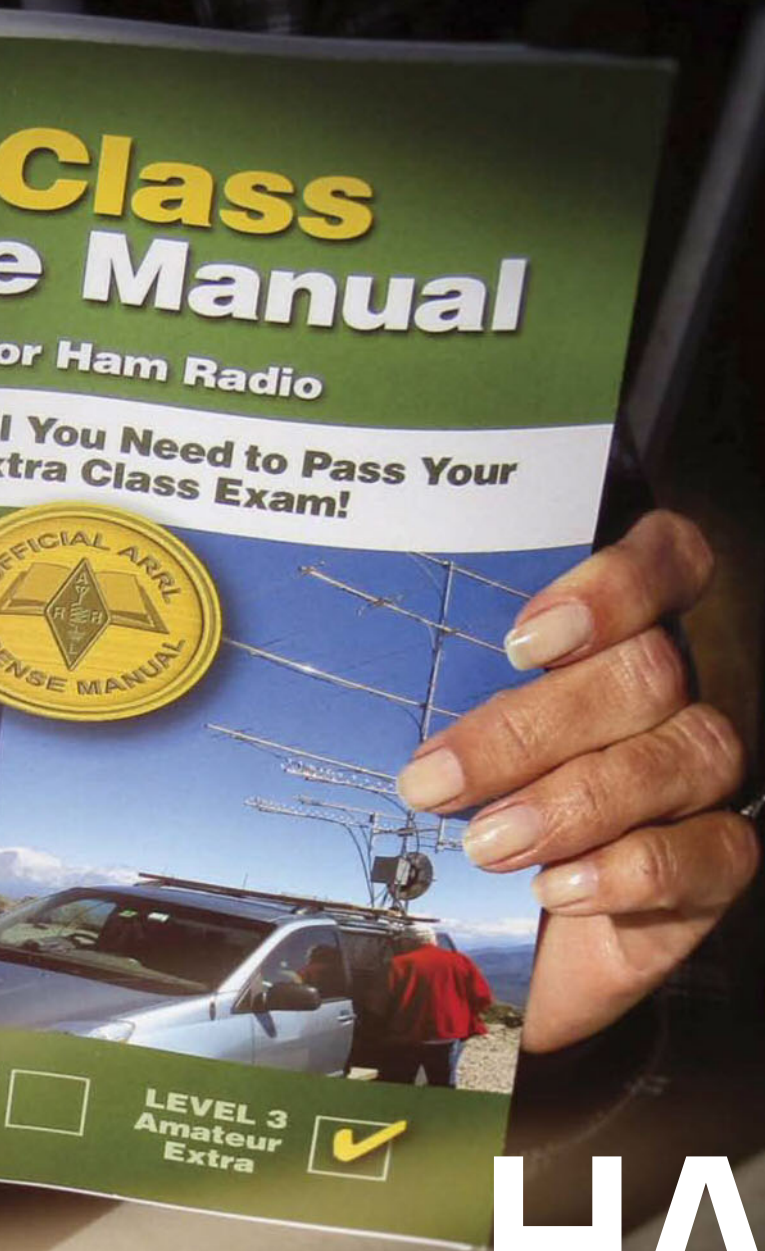
The ARRL
Extra Class License



Tenth Edition

Includes the 50-question Extra Class test.
Includes exam Questions and Answer Key, for use through June 30, 2016.
Includes explanations for questions, including

LEVEL 2
General



**AMATEUR RADIO IS NOT
JUST THE FIRST LINE OF
COMMUNICATIONS. IN
MANY CASES, IT IS THE
ONLY LINE.**

STORY BY JIM JEFFRIES

HAMS AT *THE READY*

Wireless communication is nothing new. For over a century, radio waves have been used

to carry information over distances great and small, either in the form of "dits" and "dahs" (dots and dashes) used in Morse Code (also known as "continuous wave," or CW, in amateur radio parlance); voice, which hams refer to as "phone" (think of microphone); or data being transmitted as either analog tones or digital bits. Radio communication takes place at the speed of light over the airwaves through the use of transmitters and receivers connected to antennas to radiate or gather energy in the form of electromagnetic waves.

Our cell phones utilize wireless radio to do these things—and more. Just like the transceiver (a single piece of equipment that contains both a transmitter and a receiver) used by hams, cell phones work by sending and receiving radio waves through the air. But, unlike a powerful ham transceiver, cell phones do not communicate directly with each other; they rely on a network of cellular towers tied to multiple layers of other systems to connect the two low-power devices.

► Seasoned hams are usually more than happy to explain the different aspects of amateur radio to newcomers. Here, an "Elmer" (mentor) demonstrates to aspiring young hams how to set up a portable HF radio.

HAMS SAVE THE DAY

These interconnected systems are completely dependent on a vast infrastructure that is very complex and sometimes, quite fragile. Tied to the same systems that provide Internet and other telecommunications services, they are vulnerable to threats posed by natural disasters, computer viruses and cyber-terrorism.

Hurricanes, tornados, earthquakes, prolonged power outages and even careless utility workers can totally disrupt or destroy one or more of the vital systems that make cell phone communications possible. For example, in August 2005, Hurricane Katrina devastated the U.S. Gulf Coast with destructive wind, rain and flooding. The infrastructure was literally blown or washed away, and there was no hope of getting any of it back in operation quickly. Hundreds of ham radio operators were requested by the American Red Cross to provide relief communications. Law enforcement, public safety and emergency services had no way to communicate in the disaster area. Were it not for the help of hams, they wouldn't have been able to request equipment or materials to aid the victims of the storm.

Tornado season brings similar, although more localized, threats. Hams volunteer to assist the National Weather Service through the SKYWARN program in tracking storms that might spawn tornados or produce other life-threatening hazards. These "eyes-on" storm spotters save countless lives each year.

The massive earthquake in Haiti in 2010 left thousands without any emergency services. Once again, hams were requested to establish communications in devastated communities and at field hospitals to coordinate aid.

In not one of these disasters or countless others throughout the world has modern cell phone technology "saved the day." Amateur radio is not just the first line; it is often the only means of communication in disasters.

Remember: Hams are volunteers; they generally pay their own way and buy their own equipment. Hams learn and develop their own skills, often attending advanced training in incident command and emergency management—again, on their own time—only to donate more of their time, talents and abilities in disaster areas all over the world.

Fortunately, the American Radio Relay League (ARRL), the national association for amateur radio in the United States, maintains an assortment of radios, generators,



“YOUR FIRST RADIO SHOULD BE SIMPLE TO SET UP AND EASY TO USE.”



◀ *Left:* Maybe this is not a typical “go kit” load, but during storm season, many hams will carry a full station, including essential test equipment, in their vehicle when forecasts are calling for hazardous weather.

antennas and other equipment necessary to establish temporary communications in disaster areas. This essential gear can be airlifted wherever it is needed. All of it is donated by hams or by product manufacturers directly and is used by hams on the scene to augment their own gear during the crisis.

Many hams always keep a “go kit” in their vehicles. An event can happen at any time, and they are ready to sustain themselves for anywhere from 24 to 72 hours until they are relieved or their services are no longer required. In addition to the mobile radio installed in their vehicles, many carry other radios—such as a portable handheld transceiver (HT) and a more-capable base station—and some even have the ability to erect stationary antennas in the disaster area.

Hams who volunteer might find themselves assigned to field hospitals, mobile kitchens, supply distribution centers, police stations or even the passenger seat of a National Guard Humvee. In any place that requires reliable communications, hams are always at the ready.

Becoming a ham does not obligate you to do any of this, but this exemplifies the compassionate humanitarian nature of the amateur radio community.

TAKE THE TEST

As impressive and important as all this sounds, today, it is easier than ever to become a ham. Meeting the requirements

▶ *Right:* A couple of hams erect a stationary antenna mast during a training exercise. Common materials such as this modified painter’s extension pole are used to keep costs to a minimum.



is not as difficult as you might think. There is no minimum age to become a ham, and quite a few youngsters—some of whom are not even in high school yet—have earned their amateur radio operator licenses (for example, a few years ago, I witnessed a 12-year-old young lady get a perfect score on the Amateur Extra exam).

To earn your first license, passing a 35-question multiple-choice exam is all it takes (and you don't need a perfect score). The entry-level Technician Class exam tests your knowledge in the areas of operating practices, regulations, safety and basic electronics. All the information needed to pass the exam is contained in the *Ham Radio License Manual* (now in its third edition), produced by the ARRL. You can purchase the manual via the ARRL online store (www.ARRL.org), your local book store or on Amazon for less than \$30. The ARRL's *Ham Radio License Manual* can be used with the ARRL's online Exam Review for Ham Radio, allowing you to practice taking the exam with the actual exam questions. It helps to take the practice exam periodically while you are studying the manual to make sure you really understand the material.

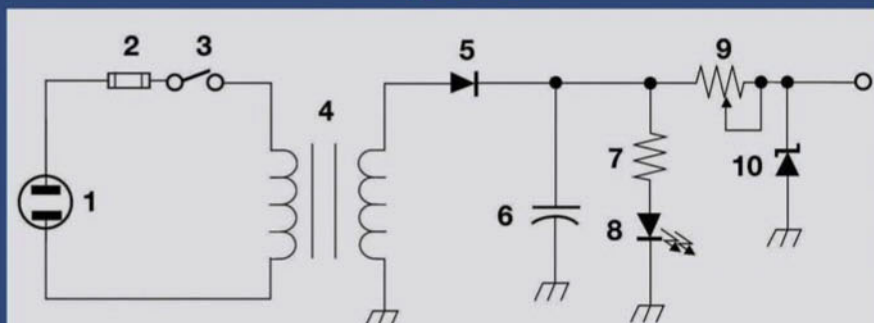
Continue taking the practice exams after you have completed your studies, because this

“... UNLIKE A POWERFUL HAM TRANSCEIVER, CELL PHONES DO NOT COMMUNICATE DIRECTLY WITH EACH OTHER ...”

will build your confidence as it exposes you to every possible question in the exam pool (there are approximately 425 questions in the technician exam question pool) and will ensure you are ready to take the actual exam.

To aid in your understanding of all exam topics, additional study resources can be found on the ARRL website, as well as on other sites on the Internet. There is a terrific YouTube channel by Dave Casler with lessons covering every section of the ARRL study manuals (you can access Casler's informative videos from his webpage: <http://dcasler.com/ham-radio>). There are also apps for Android and Apple devices to help you prepare for the exam.

Figure T-2



➤ Above: The ability to identify simple electronic components on a schematic is part of the technician license course. Don't worry—everything is in the manual.

➤ Unlike other radio services that only permit operation on a few frequencies, hams have many different bands and millions of frequencies to choose from. This is what makes amateur radio so effective.

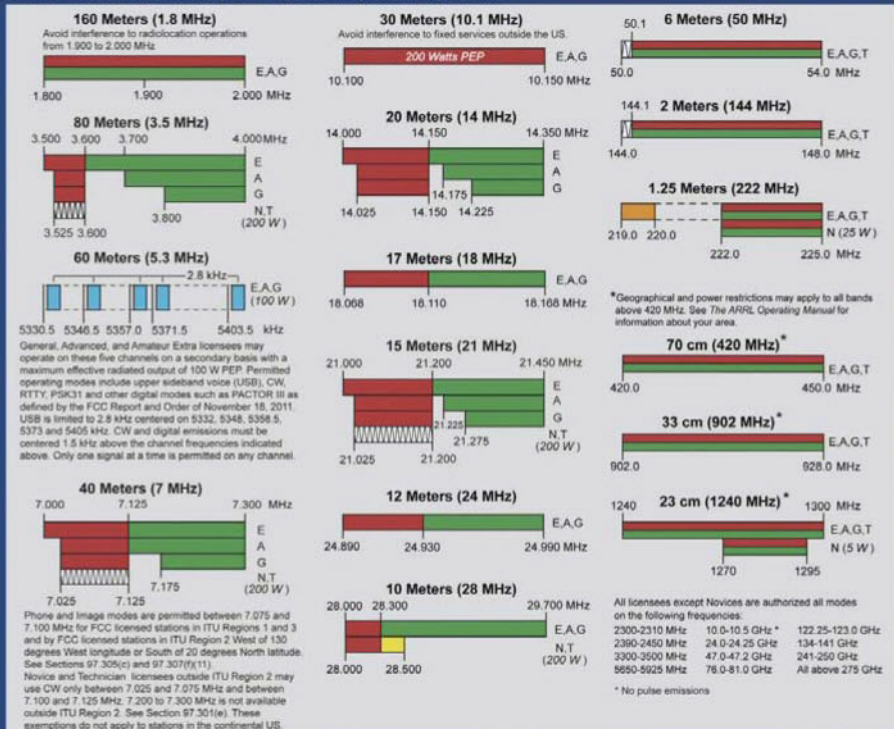
US Amateur Radio Bands

US AMATEUR POWER LIMITS

FCC 97.313. An amateur station must use the minimum transmitter power necessary to carry out the desired communications. (b) No station may transmit with a transmitter power exceeding 1.5 kW PER.

Effective Date
March 5, 2012

Published by:
ARRL The national association for
AMATEUR RADIO®
www.arrl.org
225 Main Street, Newington, CT USA 06111-1494



KEY
Note:
CW operation is permitted throughout all amateur bands.
MCW is authorized above 50.1 MHz, except for 144.0-144.1 and 219-220 MHz.
Test transmissions are authorized above 51 MHz, except for 219-220 MHz.

RTTY and data
phone and image
CW only
SSB phone
USB phone, CW, RTTY, and data
Fixed digital message forwarding systems only

E = Amateur Extra
A = Advanced
G = General
T = Technician
N = Novice

See ARRLWeb at www.arrl.org for detailed band plans.

ARRL
We're At Your Service

ARRL Headquarters
805-594-0200 (Fax 805-594-0299)
email: hs@arrl.org

Publication Orders
www.arrl.org/shop
Toll-Free 1-888-277-6289 (805-594-0355)
email: orders@arrl.org

Membership/Circulation Desk
www.arrl.org/membership
Toll-Free 1-888-277-6289 (805-594-0338)
email: membership@arrl.org

Getting Started in Amateur Radio
Toll-Free 1-800-326-3942 (805-594-0355)
email: news@arrl.org

Exams: 800-594-0300 email: vec@arrl.org

Copyright © ARRL, 2012 rev. 4/12/2012

Exams are administered by volunteer examiners who are, themselves, licensed hams, and exam sessions are held at scheduled times and places. The exam fee is typically \$15. You can find a local exam session on the ARRL website (www.ARRL.org/Exam_Sessions/Search). The ARRL provides many services to hams and publishes a monthly magazine, *QST*, which is dedicated solely to amateur radio and is included with your membership. (I sincerely encourage you to join.)

CALL SIGNS

Upon successfully passing the exam, your paperwork will be processed (usually within 10 days), and you will be issued your official call sign and station license grant from the Federal Communications Commission (FCC).

The call sign is a very important part of amateur radio; this is how you identify yourself on the radio. Each call sign is unique and allows other hams to know exactly with whom they are communicating.

The FCC keeps a database of call signs allowing others to look up your “call” to determine who you are, how long you have been a ham and the class of license you hold. As soon as your call sign shows up in the database, you are allowed to operate your radio. Not using your call sign or using another’s call sign are violations of FCC regulations and can land you in hot water. While amateur radio is self policing, persistent disregard for rules will get the FCC involved; this might result in a stern warning letter—or worse: License revocation, equipment forfeiture and/or stiff fines are all possible penalties.

The amateur radio bands (separate groups of frequencies) are spread throughout the radio frequency spectrum. Of primary interest are the high-frequency (HF), very-high-frequency (VHF) and ultra-high-frequency (UHF) bands. Long-range conversations typically take place on the HF bands, while more localized communications occur in the VHF and UHF bands. Technician class licensees have full operating privileges on all VHF and UHF amateur bands, but the majority of the longer-range HF ham bands are reserved for the higher general and extra class licensed hams. However, there are small segments available to the technician class, permitting limited operation within some of these bands.

While technicians don’t get full privileges on HF, they are allowed to gain valuable experience while making exciting long-

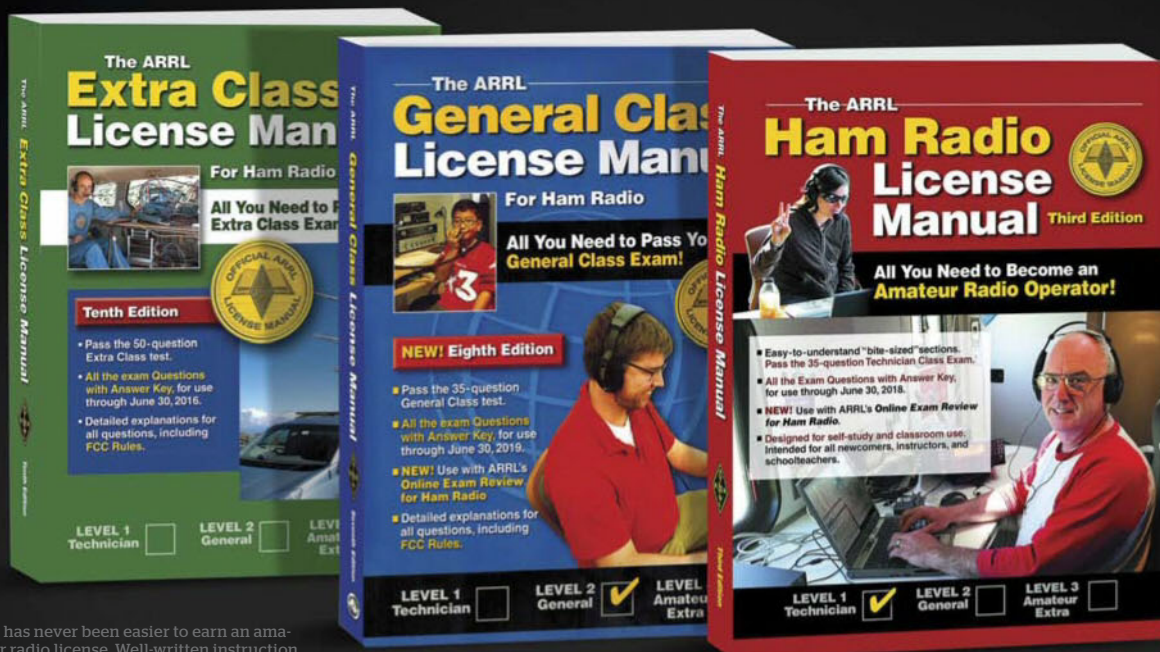


“IN ANY PLACE THAT REQUIRES RELIABLE COMMUNICATIONS, HAMS ARE ALWAYS AT THE READY.”



◀ Above: Amateur radio club members do more than just sit around talking on their radios. Many of them teach evening and weekend classes to help beginners and those seeking to upgrade their licenses.

◀ Ham radios come in all sizes—as do radio operators. Youngsters pick up new skills very quickly and build confidence along the way.



➤ It has never been easier to earn an amateur radio license. Well-written instruction manuals cover every topic of study necessary to pass the exams.

“IT IS COMMON FOR A PROSPECTIVE OR NEW HAM TO SEEK OUT A MENTOR, KNOWN IN AMATEUR RADIO AS AN ‘ELMER.’”

➤ Below: Having a radio that is easy to program, such as the Yaesu FT-60, makes it easy to teach others how to do it.

distance contacts if they have access to the necessary equipment. Think of the technician license as a “learner’s permit” for the rest of what ham radio has to offer.

Limited access to the HF bands provides an opportunity for the new ham to gain a better understanding of the operating principles and practices in the HF realm while minimizing the potential for causing unintentional interference far away from home. These restrictions also provide an incentive for technicians to continue learning the fundamentals, and many new hams quickly advance to the higher license levels.

FIND AN “ELMER”

It is common for a prospective or new ham to seek out a mentor, known in amateur radio as an “Elmer.” The Elmer teaches them about radio through demonstration and supervised operation of station equipment. Fundamentals of radio wave propagation and antenna resonance are often very new and complex concepts to the new ham. As a result, an Elmer can greatly speed up the learning process for getting that first license or an upgraded license by explaining in depth all the topics the student must understand.

Building an antenna with the guidance of an Elmer clears away much of the mystery through hands-on experience. If you have a





relative or friend who is a seasoned ham, they will most likely be happy to take you under their wing and guide you along your way.

Another place to seek knowledge is your local amateur radio club. Search the Internet for a club in your area and find out where its meetings or activities take place. Most amateur radio clubs hold events that are open to the public. Go to one, and you will likely find a ham who will welcome your questions with enthusiasm. Many clubs even conduct evening and weekend classes to help prepare students for the exam, and some even have practice exam sessions.

YOUR FIRST HAM RADIO

One area in which an Elmer can be of great assistance is the purchasing of your first ham radio (hams love to spend another ham's money!). This first radio sets the stage for your continued learning and enjoyment of the hobby. Getting it wrong can lead to frustration and prevents many new hams from learning new skills; some might give up all together.

Your first radio should be simple to set up and easy to use. It must be capable of performing common operations, such as accessing amateur radio repeaters, while not having so many features that it becomes overwhelming. It should be portable, allowing you to take it with you wherever you go, but also capable of being used as a base or mobile station. It must also be reliable and affordable. To meet these requirements, a good-quality HT, along with a few accessories, is most often recommended.

Many hams' first station consists of a dual-band VHF/UHF handheld transceiver from one of the major manufacturers (Yaesu, Icom, Kenwood or Alinco), along with the following items:

- ✦ An extra rechargeable battery pack or one that accepts common alkaline "AA" batteries;
- ✦ An aftermarket higher-gain antenna that attaches directly to the radio in place of the original antenna;
- ✦ A magnetic-mount antenna with attached coax for vehicular use; and
- ✦ An adapter to connect the HT to a stationary outdoor antenna for base station use (HTs usually have a small antenna connector that requires an adapter in order to connect a full-sized antenna).

Such a station will give a new ham access to the popular 2-meter and 70-centimeter bands used for local and regional communications while learning and practicing new skills and radio etiquette. This simple, yet effective, station is versatile enough

✦ An instructor answers a question about how radio call signs are issued. A map in the manual shows the breakdown of the geographic area the number in the call represents.

to provide reliable two-way radio communications—whether the operator is on foot, driving down the highway or sitting on the living room sofa. Such a capable station is quite affordable (less than \$300).

While your radio ambitions may quickly outgrow the capabilities of your first station, choosing a good-quality radio in the beginning will ensure that it remains a part of your core equipment. Installing a more powerful mobile radio and antenna in your vehicle and setting up an all-band/all-mode transceiver capable of global communications will come later. Getting your feet wet with an easy-to-use HT—one you will enjoy for many years—is a wise investment.

We have touched on the effectiveness of amateur radio; the requirements and ease of getting a license; and what to look for in your first station. I encourage you to visit the ARRL website to learn more.

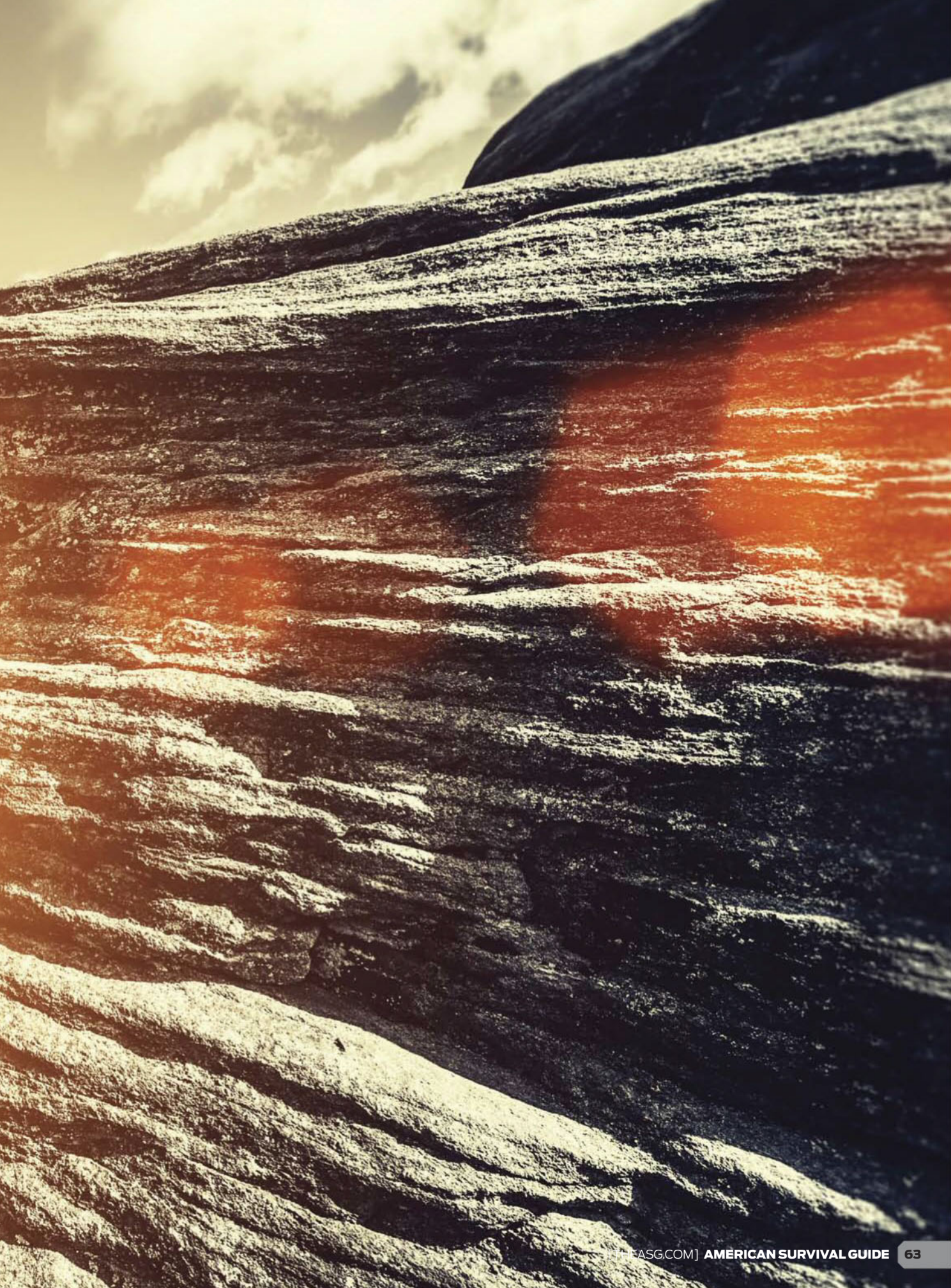
In no other hobby will you find the extraordinary support and assistance than that which exists in ham radio. We hams understand that the better you become, the more efficient and effective the ham radio community becomes. While we view amateur radio as a hobby most of the time, when disaster strikes and our services are needed, we are ready. **ASG**



DEALING WITH HEAT

**HOW TO KEEP COOL AND HYDRATED
IN AN EXTREME ENVIRONMENT**

BY CHRISTOPHER NYERGES



“IT IS CRITICAL TO HAVE REGULAR WATER INTAKE DURING HOT WEATHER... YOU MUST FIND CREATIVE WAYS TO CONSERVE YOUR BODY’S WATER.”

My students and I headed out on our survival skills trek into the mountains at 8:30 in the morning. The temperature was already in the high 80s and would be more than 100 degrees before our walk was over.

I have practiced outdoor survival skills in the searing heat of the high desert for years, and I want my students to take advantage of my experience and training.

Before we set off down the trail, I had everyone open their canteens. I poured a teaspoon of raw apple cider vinegar into each one.

A few students rolled their eyes in disbelief as I did this, but then, I explained: Vinegar is a remarkable substance. Whole books have been written about the many unique qualities of vinegar (such as *Vermont Folk Medicine* by Dr. D.C. Jarvis).

I added that vinegar has the ability to affect the hypothalamus, the gland that controls—among other things—the body’s “cooling system.” With just a teaspoon of raw apple cider vinegar per quart of drinking water, one can tolerate the heat without feeling drained and stressed. A secondary, and less important, benefit is that mosquitoes tend to bite less if you regularly consume vinegar in your diet.

“Talk only when you need to,” I instructed the students. “And we’ll stop often to rest in the shade.” Under the trees, and in the shade of the north side of the hills, the temperature would be about 20 degrees cooler.



GETTY IMAGES.COM/BYCKOVELMA



◀ Don't let this happen to you! Plan your travels around water, where possible. Consider traveling at night when the days are excessively hot.

THE PEBBLE MYTH

During our trek, one of the students asked, "What if your canteen is empty and there is no stream nearby? Is it true you can just suck on a smooth pebble to get your water?"

I asked him where he'd heard this. He wasn't sure, but he thought he heard it some 20 or so years earlier when he was a Boy Scout.

Let's dispel this myth: You can't get water out of a little pebble—and you won't prevent dehydration, either.

The only thing the pebble does is prevent the discomfort of extreme thirst. But you'll still need to get some water ... somewhere, somehow.



NO PLACE FOR FASHION

During one of our shade stops, we saw a young man and woman walking along the trail. They both wore skimpy shorts and thin tank tops. They wore no hats; nor did they carry canteens.

When the woman saw how we were dressed, she commented, "You're sure going to be hot wearing all that stuff"—referring to my long pants, long-sleeved shirt and wide-brimmed hat.

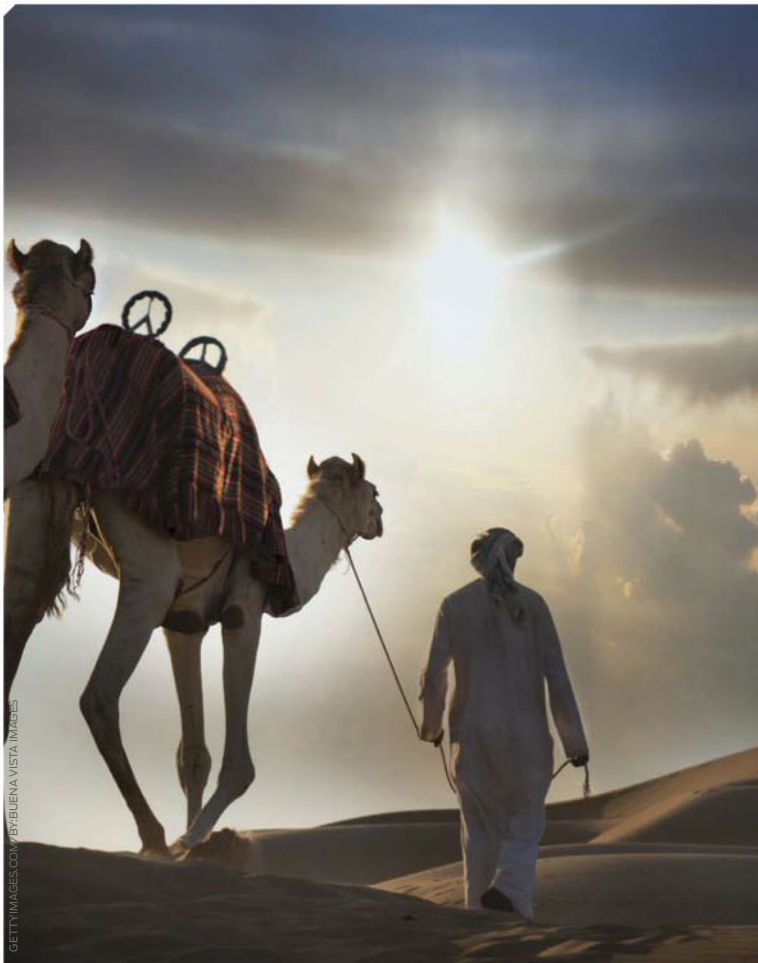
In fact, I was wearing light-colored, lightweight cotton pants and shirt and a hat with a broad brim for shade. Unlike her and her companion, I made my own shade, and my clothes were light and airy.

Before I had a chance to respond, they had walked on. I pointed out to my students that the pair probably didn't realize they were brushing up against the abundant poison oak with their bare arms and legs as they walked through a narrow portion of the trail.

Later in the day, when the couple passed us again on their way back out of the canyon, their skin was brilliant pink from sun exposure. They looked tired and haggard.



GETTY IMAGES.COM/BY GARY ALVIS



GETTYIMAGES.COM/BYBUENA VISTA IMAGES

◀ Historically, those who live (and survive) in the desert, fully cover their body and head with white or light-colored fabric (such as robes).

I smiled and told them to watch out for poison oak.

"Huh? Poison oak? That grows around here?" the man responded as they continued on their way.

I turned to my students. "How do desert nomads dress? They wouldn't survive in the desert if they dressed like those two. They can now go home to their air conditioner and jars of lotion to soothe their sunburn. But if you actually live in the desert, you learn to cover up—or you suffer from heat stroke and die.

"Have you ever seen how the people dress who live their entire lives in the desert? They wear loose-fitting robes. Note how different that is from the average American, who might travel to the desert to look at wildflowers or to the beach ... wearing the skimpiest of outfits. This is fine if you want to show off, but it's certainly not great for your body's health."

A WORD ABOUT HATS AND FABRICS

Regarding a choice of hat: Although there are many styles of hats to choose from, the best style should feature a wide brim all around and rest comfortably on the head. There should be just a bit of air space above the head. Baseball caps are OK to shield the sun and perhaps some dust, but they are otherwise very limited in their usefulness.

Summer clothes should fit loosely and be made of lighter fabric; cotton and natural fabrics are best. Polyesters do not "breathe" as well.

EVAPORATIVE COOLING

My group eventually found a river, where we all wet our clothes to cool off and filled our canteens (the water was good to drink in that area).

John Nall, who works as a supervisor at Southern California Edison, once explained to me how ancient Egyptians cooled their homes. Nall, whose department supplied evaporative coolers to customers, told me that ancient Egyptians hung wet camel hair rugs in their window and door openings. The wind blowing through their homes would evaporate the water and cool the air. This system most likely comprised the original evaporative cooler. And our wet clothes cooled us in a similar fashion throughout our trek.

It is critical to have regular water intake during hot weather. When it is not readily available, you need to carry your water with you. In addition, you must find

◀ During periods of excessive heat, consider traveling at night. Short pants and uncovered heads are not a good way to dress during the heat of the day.



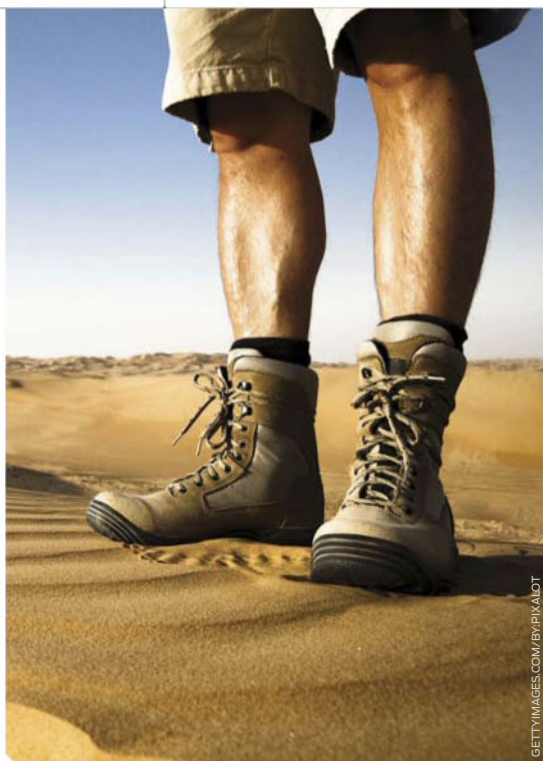
GETTYIMAGES.COM/BYGHISLAIN & MARIE DAVID DE LOZBY

"TO STAY COOL AND HEALTHY DURING PERIODS OF EXCESSIVE HEAT ... DRINK A LOT OF FLUIDS, GO SLOW, STAY IN THE SHADE, COME OUT AT NIGHT AND TALK LESS."

◀ In some environments, water can be hard to find. These tall columnar cacti will not likely yield much usable water. You might do better to dig at the base of the hills or in a dry river bed.



“WHEN NO OBVIOUS WATER SOURCES ARE AVAILABLE, YOU CAN GET WATER IF YOU EAT CACTUS. I HAVE DONE THIS ON SEVERAL OCCASIONS.”



creative ways to conserve your body's water. For example, if you must do strenuous work, do it at night. Additionally, a lot of talking and yelling, as well as smoking cigarettes, cause a big water loss.

WATER FROM PLANTS

When no obvious water sources are available, you can get water if you eat cactus. I have done this on several occasions.

You can commonly find edible cactus throughout most of this country. The prickly pear cactus, about 90 percent water, is the most common. It is quite easy to scrape the spines off a young cactus pad, peel the skin and then eat the green cactus. The young ones are tender and taste like a slightly sour green pepper.

There are many more edible wild plants that can be safely eaten, but you need to know how to accurately identify them—and, in some cases, how to properly and safely “tap” them for water.

COMMON-SENSE ADVICE

To stay cool and healthy during periods of excessive heat, remember to drink a lot of fluids, go slowly, stay in the shade, come out at night and talk less. (And don't forget to add that vinegar to your drinking water.)

Don't make the mistake of consuming beer or other alcohol during extreme heat. Alcohol consumption acts like a diuretic, and you end up perspiring and urinating out more water than you consumed. The consumption of alcoholic beverages during periods of high heat results in a net water loss. Even if alcohol is all you have, do not consume it.

Additionally, avoid coffee (although coffee isn't quite as bad as alcohol). Coffee, like alcohol, tends to act as a diuretic, partly because of how people drink it—within a short period of time. If all you have is coffee, sip it slowly throughout the day.



GETTY IMAGES.COM/ISTEFEN LEIPOLDT / STOCK48

SALT TABLETS

What about adding salt tablets to your drinking water during the heat? This practice has long been recommended in first aid and survival literature ... and, this might be one of those myths that is hard to bury.

However, according to an article by Susan Zarrow that appeared in the August 1985 issue of *Prevention* magazine, "You don't lose that much sodium in sweat. Your body has lost so much more water than salt (after profuse sweating) that the percentage of salt in the blood is actually elevated. Taking salt tablets isn't healthy."

NATURAL AIR CONDITIONING

When tipis still dominated the plains, Native Americans took advantage of natural airflow. On very hot days, the bottom part of the tipi would be rolled up a foot or so to leave an open space all around the bottom. Hot air rising in a narrower space (specifically, the cone-shaped top of the tipi) would speed up just slightly as the air exited the smoke flap. This process, known as the Venturi Effect, created airflow, even when there was no wind. **ASG**

THE ONLY MONTHLY SUBSCRIPTION THAT COULD KEEP YOU ALIVE!

CHOOSE FROM 4 DIFFERENT LEVELS
BASIC, ADVANCED, PRO, OR KNIFE OF THE MONTH!
KNIVES, SURVIVAL TOOLS, TACTICAL GEAR, & MORE!

BATTLBOX
SURVIVAL & TACTICAL GEAR
DELIVERED MONTHLY



SIGN UP NOW AT
WWW.BATTLBOX.COM

A person's hand is visible on the right side of the frame, holding a rifle with a scope. The rifle is pointed towards the left. The background is a wooded area with trees, rocks, and fallen leaves. The lighting is natural, suggesting daytime.

THE HIDDEN WOODSMEN HAS A LOYAL FAN BASE—AND FOR GOOD REASON

TEXT AND PHOTOS BY KEVIN ESTELA

TOUGH AS NAILS

Where can you find the Hidden Woodsmen? The obvious answer is in a nylon workshop in New England; or maybe it is his website. The actual answer isn't so obvious.

You can find the Hidden Woodsmen somewhere along the line where traditional styling meets modern materials and construction. The Hidden Woodsmen is known for taking proven designs and catching them up to speed.

The Hidden Woodsmen's gear is as tough as nails. Owner and craftsman Malcolm Coderre utilizes MIL-SPEC hardware and fabrics so that whatever is purchased can be used for years. Far from the prices of "designer nylon," Coderre's gear is every bit as good (if not better).

Earlier this year, I was sent a sampling of the Hidden Woodsmen's gear. I found out why more people should look for what isn't so hidden right in front of their eyes.



› The author used The Hidden Woodsmen Haversack to carry a variety of gear on different wilderness survival training days, as well as a pistol range bag, a foraging kit and general bushcraft shoulder bag. It's the perfect bag for when all you need to do is grab your rifle and haversack before hitting the woods.

01.HAVERSACK

The goal of bushcraft is to be able to do more with less and to reconnect with the natural world. It is foolish to travel into the woods unprepared. A safety net, woven with layers of preparedness, should be cast over your outdoor travels. The Hidden Woodsmen Haversack is designed to carry equipment that will supplement your skill and protect you from harm as you enhance your experience traveling farther from home. Measuring 12x11x4 inches, it is large enough to carry a small tarp, metal water bottle, fire kit, cutting tools, cordage and more.

When I was the lead survival instructor at the Wilderness Learning Center, I carried my bushcraft kit in a repurposed GI buttack with a M60 padded sling. Many bushcrafters have used similar setups, which are often made from surplus canvas and nylon bags, for similar makeshift

◀ Below: A tomahawk can be carried via the rear-mounted loop on the back of the Haversack body.



◀ Right: The Hidden Woodsmen Haversack works well as a foraging bag and can hold a day's collection, along with gathering tools and plant identification books.

shoulder bags. The Woodsmen Haversack, however, is much more purposeful—and definitely feels it.

Its side panels feature a couple of rows of MOLLE paneling to attach supplemental pockets if necessary. These panels also serve as good attachment points for carabiners so you can quickly clip other gear onto the bag. On the front of the Haversack's main body is a zippered pocket almost the full size of the front panel.

The inside back panel of the Haversack features a sleeve pocket, and its main pouch is protected by a two-piece hook-and-loop baffle. There is an open tunnel on the exterior back of the main pouch body that is perfectly sized for a tomahawk handle. I found that by running a length of paracord or shock cord around the back, I was able to secure the head of my tomahawk even more securely.

One other convenient feature is the quick-release, 2-inch buckle that connects the shoulder strap to the bag. After a long day of hauling, it is easier to simply unclick the shoulder strap to remove it from your body than passing the strap over your head and arm.

I wore the Haversack with all the usual gear I normally carry while teaching bushcraft courses. This included a small hatchet, folding saw, Heavy Cover titanium canteen, cordage and fire kit, as well as other small provisions. The pack wore comfortably and kept my gear organized while in the field. I experimented with other setups and used

◀ A close-up of the reinforced stitching found on all Hidden Woodsmen products



“THE HIDDEN WOODSMEN HAVERSACK IS DESIGNED TO CARRY EQUIPMENT THAT WILL SUPPLEMENT YOUR SKILL AND PROTECT YOU FROM HARM AS YOU ENHANCE YOUR EXPERIENCE TRAVELING FARTHER FROM HOME.”

my Haversack sample to carry gear to the range, my foraging kit and provisions bag for road trips.

In sum, the Haversack makes the perfect “grab-and-go” bag for quick retreats into the backwoods.

MSRP: \$95

02. BELT POUCH

Carry some gear in your pockets long enough, and you’re going to find holes in your pockets. Pieces of hacksaw blades used as ferro rod scrapers, crenelated bezels of flashlights and even sharp pencaps can work against the thread holding your pockets together. Mountain men never had this problem. Why? They didn’t have pockets in their pants ... so they carried their gear on their belts.

Today, some items are still better carried on a belt, possibly in a pouch. This is the basis behind the The Hidden Woodsmen nylon Belt Pouch. It is available in two sizes: small (6x7 inches) and large (7x9 inches). Made from double-layer nylon, this pouch will hold up for years of use.

HAVERSACK POSSIBILITIES

The history of the haversack dates back to the Napoleonic Wars, along with carrying oats, or “hafer,” to make a hardtack-like basic bread. Although the haversack has roots in soldiering from hundreds of years ago, it has many practical uses today for the modern survivor.

Meant to supplement the kit carried in the pockets and worn in the backpack, the haversack can house both essential and luxury items. Multiple haversacks can be set up for different purposes and grabbed when the mission or objective calls for specific gear packed away.

The following items comprise just a handful of potential modern-day haversack uses.

- ◀ DEDICATED MEDICAL KIT
- ◀ FISHING TACKLE BOX
- ◀ MUZZLOADER BAG
- ◀ EDC POUCH
- ◀ CAMERA EQUIPMENT FIELD BAG
- ◀ SCHOOL/BOOK BAG
- ◀ PROVISIONS/RATIONS POUCH
- ◀ FORAGING BAG
- ◀ TRAPPER’S BAG
- ◀ ESCAPE AND EVASION POUCH
- ◀ EMERGENCY OVERNIGHT KIT
- ◀ BINOCULAR AND BIRDING BAG
- ◀ DOG TRAINING BAG
- ◀ TOOLS AND REPAIR KIT
- ◀ AMMO CARRIER
- ◀ TARP SHELTER KIT
- ◀ TRACKING KIT
- ◀ CIGARS AND WHISKEY KIT
- ◀ CARVING AND WHITTILING TOOLS KIT
- ◀ HEALTH AND HYGIENE BAG



◀ The Belt Pouch will hold 30 shotgun shells—with some room to spare—and has a wide enough opening for easy access to the contents.

INTERVIEW WITH MALCOLM CODERRE

American Survival Guide: What inspired you to start *The Hidden Woodsmen*?

Malcolm Coderre: Many things have inspired me. In my 20s, I studied history in college, which increased my interest in gear from the past. However, I dropped out after two years, because I began to realize I didn't want to write history papers for the rest of my life. I have always sewn and fixed my own gear to make it my own. When I would get home from work and on weekends, I started to make gear to trade and sell. The gear started to become widely known and desired. Eventually, I quit my job and went full time making and designing gear. I was inspired that I could do something for work that I loved to do, something that draws out my creativity and that I am knowledgeable and passionate about. The daily grind of a dead-end job drove me to take risks and put myself out there in the gear-making world.

ASG: Where do you draw inspiration for your designs?

MC: I draw my inspirations from 19th- and 20th-century gear. The gear designs of those times have a nostalgic feel to them. Some of them are so simple but very practical. My goal in designing is to keep that same style of gear for a mountain man of the mid-1850s or a soldier in the 1940s—but made with modern materials. I also draw a lot of my inspiration from mid- to late-20th-century European surplus.

ASG: What's the most gratifying customer feedback you've received?

MC: All of it, really. I strive hard to give 110 percent customer service. I enjoy talking to customers. I love when they send me photos of themselves using the gear that I made with my own two hands. It really does warm my heart.

ASG: Who are your customers?

MC: All types of people use The Hidden Woodsmen gear. People in the military, hunters, bushcrafters, hikers, campers and people in the city. Moms even use them as diapers bags. The list goes on.


ASG: What can readers expect from the *Hidden Woodsmen* within the next year?

MC: They can expect the same quality and customer service I have always given. I am always working on new designs and better ways of crafting durable gear. I will also be offering limited runs of special colors. I have a newly undated website for 2016. You can also catch me on my YouTube channel and Facebook page.



Compared to a leather bushcraft saw pouch, the Laplander Pouch is less expensive, is lighter and will not retain water when wet, as can happen when worn on the outer belt.





› The Tinder Pouch holds multiple large handfuls of natural tinder, such as this birch bark, as well as premade tinder-like jute twine.

“THE HIDDEN WOODSMEN IS KNOWN FOR TAKING PROVEN DESIGNS AND CATCHING THEM UP TO SPEED.”

During the testing phase of the Belt Pouch, I deliberately attached it onto my belt—empty. Over the course of a few weeks, I added gear to the pouch as I used it throughout the day. If I pulled a Swiss Army knife or multi-tool from my daypack, I put it in the belt pouch when I was done. If I needed lip balm while out on my snowshoes, I put it in the pouch. When I went to the range to test out the upgrades to my 870 shotgun, I put spare shells in it. This formula was repeated day in and day out.

For most daily functions, I could carry what I needed in this pouch. The deep pocket and generous flap meant I did not lose anything I put inside it. Additionally, the stitches never loosened, despite repeated opening.

There is no mistaking the inspiration behind the Belt Pouch. It is a modern day “possibles” pouch. Traditionally, the mountain man carried a variety of gear in his possibles pouch—fire-starting gear, extra shot for his firearms, tobacco, currency, good luck charms. Today’s possibles pouches need not be for emergency equipment and can hold life’s little luxuries instead. Cigar tubes, a small flask or sticks of jerky can all be carried on the belt, and your pockets (that the mountain men wish they had had) can be left to warm your hands.


MSRP: \$30

03. LAPLANDER SHEATH

Unofficially, the Bahco Laplander is the favorite folding saw of bushcraft enthusiasts. This is largely due to its inexpensive cost and the endorsement of British bushcraft expert Ray Mears.

One drawback to the Laplander saw has been the lack of a quality belt sheath. Although the saw can be found for under \$30 online, leather sheaths are available for approximately double that price.

The Hidden Woodsmen has an option to protect your saw and your bank account. The Laplander Sheath is designed for belt carry with drop-loop construction. It can be attached to the outer compression strap of a daypack and carried in a manner for easy access. For those who prefer folding saws from Silky or Gerber, this sheath will also fit the most popular models of similar size. In testing the sheath, I found it very comfortable worn on the other side of my body from my belt knife. Unlike a hatchet or tomahawk’s size and weight that remind you you’re carrying it, you forget you have the saw on your belt with the Laplander



Sheath. For someone who does a lot of woodwork, this item makes perfect sense.

MSRP: \$25

04. TINDER BAG

As a general rule, it’s always a good idea to collect tinder as you travel. You never know when you will stumble upon it farther down the trail.

Until I received the The Hidden Woodsmen Tinder Bag, I would generally tuck pieces of birch bark, cedar fluff and marcescent (leaves that have not been removed from the tree during the fall) leaves into my pockets or into a zip-top bag. When it came time to draw upon my store of tinder, I’d dump my pockets inside out or reach for the bag, hoping it did not puncture inside my rucksack and spill its contents everywhere.

The Tinder Bag is an excellent upgrade from my cheap, plastic bag alternative and is a much neater option than filling my pockets with tinder that leaves behind no shortage of residual tinder dust.

It measures approximately 9x13 inches. The closure is a YKK snap buckle and, depending

on the quantity of contents, the flap can be rolled over itself before buckling it closed. The seams of the tinder bag run along the sides and not the bottom. Because the material is water resistant, it provides excellent protection for tinder, keeping it dry and ready for a spark-based fire starter.

Keep in mind, however, that the tinder pouch is not limited to carrying tinder. This is the perfect-sized pouch for dumping EDC gear in at the end of the day. As a hammock camper, I like to keep my wallet, Swiss Army Knife, lighter and other pocket items inside this pouch and clipped to the inside grab loop of my hammock.

The Tinder Bag can also be used for cordage. It will hold more than 500 feet of uncut paracord or numerous hanks of 550 cord and carabiners, if they are stacked properly.

MSRP: \$15

05. FIRE POUCH

It cannot be overstated that “fire is life.” Fire is an absolute essential skill for the outdoorsman. As a survival instructor, I make sure to teach multiple ways of making and



maintaining a fire. In an emergency, I don't care if you remember my friction fire lessons or if you took my advice and carried a Bic lighter in your pocket. What matters is that you know how to start a fire from some means—and save your life.

Seriously, from friction fire to flint and steel to matches to ferro rod to unorthodox chemicals and road flares, if you can get fire when you need it, who cares how you got it?

The Hidden Woodsmen Fire Pouch is large enough to house multiple fire-starting methods. At 6x7 inches, you can fit an entire box of wooden kitchen matches in a plastic bag, a 1/2-inch-wide ferro rod and two Bic lighters and still have room for supplemental tinder.

The Fire Pouch I received came with a zippered closure, but The Hidden Woodsmen can also



◀ The Fire Pouch will hold multiple fire starters, candles and tinder for a complete fire starting kit. The author was able to fit eight UST Strikeforce fire starters inside his Fire Pouch—with room to spare.



◀ The Fire Pouch will also easily hold multiple flint and steel scrapers, tinder and pieces of flint, such as these fire scrapers from Vern's Flint and Steel. (The author prefers flint strikers.)

make it with a hook-and-loop closure. Like the tinder bag, the seams are found along the sides of the pouch, and the bag is exceptionally durable.

Unlike the other nylon gear I tested, this pouch came in "blaze orange"—the ideal color for a fire kit. In an emergency, I don't want to waste my time searching around my pack to identify the right olive-drab pouch among a collection of olive-drab gear. This is why my fire kit and first aid gear are generally brighter colored than the rest of my gear.

Another use for the Fire Pouch is as a container for my ultralight alcohol-burning backpacking stove. The pouch can carry all my ultralight gear, along with a small titanium stove, bottle of alcohol, foil for a windscreen and, of course, matches, a lighter and small, sparker-based fire starter.

MSRP: \$8.50

› The author used The Hidden Woodsmen Haversack to carry a variety of gear on different wilderness survival training days and as a pistol range bag, foraging kit and general bushcraft shoulder bag. It's the perfect bag for when all you need to do is grab your rifle and haversack before hitting the woods.

SOURCE

› MALCOLM CODERRE
THE HIDDEN WOODSMEN
› WWW.THEHIDDENWOODSMEN.COM



◀ The author's original shoulder bag repurposed from a GI buttack and the Hidden Woodsmen Haversack



With summer comes the opportunity to get out in the woods and practice those skills you might have only read about or watched on

videos. It is also a great time to teach your family about preparedness and survival skills. A backpacking trip to a safe outdoor location is a great way to run through various scenarios you and your family might face during a bugout or emergency—as I did with my son and daughter.

Jack and Debbie, looked at me and, in unison, they said, “You’re kidding, right?”

I just grinned. “No; we are going to practice our bugout plans. As far as we are concerned, our house just got demolished by a hurricane. Your bugout bags are already in the car, so kiss Mom goodbye and get in the back seat.”

I had been planning this for a few weeks, and we were going to have some fun, see how much we really knew and try out some new gear. They knew we were going camping at a state park to simulate bugging out—but they didn’t know I was going to throw some twists into the scenarios I had planned.

THE OLD SWITCHEROO

The drive was going well. We talked about some basic survival and preparedness concepts, such as

when you should bug out and when it is better to stay put; the priorities for surviving in a wilderness environment; and the importance of having the right mindset. Our plan was to set up a base camp at one of the park campsites so we would have a safe and comfortable place to return to if needed. My kids seemed to be looking forward to the weekend and saw it as an adventure.

And that’s when I pulled the first twist.

As we drove past the turn into the parking lot for the campground, Jack and Debbie kidded me about needing to bone up on my navigation and map-reading skills, because I had just missed the turn. Five minutes later, I pulled over at the entrance to a dirt access road and told them it was time to get out of the car. Twist number one had just happened, and we would have to overcome a real-world challenge. In my scenario, the main highway was blocked, and the only way we could get to our destination was on foot, up that dirt road.

Debbie balked at the idea at first, because she never really thought about something like this happening. Fortunately, she had prudently tried to keep her pack weight down and had only 35 pounds to carry. Jack, on the other hand, was full of teenaged jock bravado and jumped at the challenge as he lifted his 50-pound pack onto his shoulders.

“I got this,” he said and started up the dirt road. It

GET OUT THERE AND SEE HOW MUCH YOU CAN ACTUALLY DO

BY LARRY SCHWARTZ



PRACTICE MAKES PERFECT

was 5 miles from where we left the car to the campsite—most of it on the dirt road and with the last mile cross country with map and compass.

I pulled out my map and gave it to Debbie. “OK; show me where we are.”

I was a proud papa as she pulled out her compass (yes, Debbie had remembered to bring it). She took an azimuth to two hilltops she could see from where we were and drew them on the map. She smiled as they crossed on the unimproved road symbol on the map that showed where we were along the road.

It was then Jack’s turn to determine the direction to the campsite parking lot and lead us there. There were two of them, so they decided to leapfrog along the azimuth to help stay on track and not wander left or right of our travel direction. An hour later, we were at the parking lot and checked in with the ranger for the remote campsite I had reserved the week before.

HUNTING FOR BUSHYTAILS

Setting up camp went smoothly. I set up my five-person tipi, which would serve as our base camp, and refilled our water containers with the pump filter I keep as part of my bugout bag kit. The kids set to gathering firewood for the weekend and then divided it all into tinder, kindling, as well as larger sticks and branches. When



GETTYIMAGES.COM/BY-FRANCKREPORTER

“AFTER A LONG DAY IN THE FIELD, THE FISH AND GREENS TASTED GREAT. TIME AROUND THE CAMPFIRE UNDER A CRESCENT MOON WAS A GREAT WAY TO END OUR FIRST DAY.”



GETTYIMAGES.COM/BY-ALEKSANDER RUBTSOV

that was finished, they covered it with a lightweight tarp to keep it dry.

We then sat down at the picnic table and munched on energy bars and GORP for lunch. While eating, Jack mentioned that he might add a water filter to his kit, too. (Carrying 25 pounds of water for three days might not have been such a good idea after all.)

He did note that choosing a pack with a good waist belt was the only thing that made the 5 miles cross country bearable with the 50 pounds he was hauling. I smiled as I saw the first rewards of doing this real-world practice exercise.

By now, it was around one o'clock in the afternoon. It was squirrel season, and we were allowed to hunt in the park, so I suggested we try to augment dinner with some bushytails. They both liked the idea, because fresh meat instead of dehydrated food sounded great—not to mention that they were both competitive, and each one wanted to prove they were the better shot.

I dug out the takedown survival bow and takedown arrows I keep in my bugout bag, and we all headed into the woods. We found some squirrels, but they were craftier than my kids. As a result, although we had some shots, none of them connected. On the brighter side, we did find some clover, dandelions, wild onions and purple dead nettles, all of which are edible wild plants.

“I WANTED THE WEEKEND TO BE CHALLENGING AND INSTRUCTIONAL, BUT I ALSO WANTED IT TO BE ENJOYABLE.”



GETTYIMAGES.COM/BY:JOHN FEDELE



◀ A small, half-liter pot takes up little room in your pack and will hold a small, solid-fuel stove, water purification tablet or drops, and oatmeal or beverage powders to ensure you have food if you have to spend an unexpected night away from camp. (Photo: Larry Schwartz)

They made a great salad to go with the food we had brought for dinner.

On the way back to camp, we swung by the lake that was in the center of the park. A bowhunting friend had agreed to come by that afternoon to add to our curriculum for the weekend. He was going to teach all of us about bowfishing.

BOWFISHING 101

Bowfishing is taking fish or other aquatic game with a bow equipped with a fishing reel and heavy arrow that has a special point that won't come out of the fish. The arrow is connected by a string to a fishing reel that, in turn, is attached to the bow. One of the biggest challenges of bowfishing is learning how to aim and adjust for both the heavier arrow and the refraction caused by the water.

Debbie took to it quickly, but Jack was a bit slower to get on target as we practiced shooting at light spots or pieces of wood on the bottom of the lake. And while neither of them had scored on a squirrel, they both did connect on a fish.

Getting in some more map and compass work, I had the kids find out where we were on the lake shore and then plot a cross-country azimuth to take us back to our campsite. As part of this lesson, I showed them that if a destination is on a linear terrain feature, such as the loop road of our campsite, if you pick an azimuth that is to one side of where you want to go, you don't have to worry about being exactly on target when moving cross country. Your destination is on that linear terrain feature, so all you have to do is move to it and start

› Trying my hammock tarp as a regular tarp revealed that it was cut differently and would not work as I anticipated. We made it work, but it wouldn't have been as effective against wind and rain as a rectangular-shaped tarp. (Photo: Larry Schwartz)

› Below: The first step in building a fire is getting the different sizes of wood you need—from very small tinder to slightly larger kindling and then progressively larger pieces to feed the growing fire once it gets started.



“I SMILED AS I SAW THE FIRST REWARDS OF DOING THIS REAL-WORLD PRACTICE EXERCISE.”

walking the opposite of your offset. The kids decided to go to the right with their offset, so they knew to walk to the left when they hit the road. After walking a few hundred yards through the woods, they both grinned widely when they saw our campsite come into view.

While Jack made a fire that would turn into a nice bed of coals, Debbie and I cleaned the fish and wrapped them in aluminum foil with some salt, pepper and olive oil. We set them aside and combined the wild plants we had picked earlier in the day, along with some olive oil and balsamic vinegar, into a nice salad.

After a long day in the field, the fish and greens tasted great. Time around the campfire under a crescent moon was a great way to end our first day.

The ziptop bag of s'mores fixings I stuck in Debbie's pack went over well, too. I wanted the weekend to be challenging and instructional, but I also wanted it to be enjoyable.

PINE NEEDLE TEA

A cold front moved in overnight, and Sunday morning came cold and bright. It took some motivating to get the kids up and going but eventually, they were both dressed and ready for the day's adventure.

Breakfast was instant oatmeal mixed with raisins and bacon bits in a freezer bag for a sweet-and-savory combination that has come to be my favorite for backpacking. We used the isobutane camp stove in Jack's pack to heat the water for the oatmeal, as well as the one Debbie carried for hot drinks. They were expecting cocoa or instant coffee—but I had another surprise for them: pine needle tea.

During our foraging the previous day, I had gathered a dozen of the five-needle clusters from a white pine we passed and put them into my jacket pocket. For our tea, I removed the brown bit at the end where the clusters had connected to a branch and cut them up into half-inch pieces. I dropped them into the hot (but not boiling) water and let them steep for around five minutes.

Pine needle tea is high in vitamin C, but if you boil it, you destroy the vitamin C, which is why we used not quite boiling water. We removed the pieces of pine needle from the pot, added some sweetener and had a healthy and tasty drink, courtesy of Mother Nature and a little bit of knowledge.

EMERGENCY SHELTERS

With breakfast out of the way and another lesson learned, we tossed our survival gear in our packs and ventured into the woods. My plan for the kids was to practice constructing some emergency shelters. In addition, there would be a challenge for Debbie.

We didn't have to go too far for the morning's lessons. We had only walked about half an hour before we found a level spot where we could set up different types of shelter using the tarps we carried.

I asked Jack and Debbie why this was a good spot for a campsite. Together, they came up with the key features I wanted to hear: It featured a flat area that would let us sleep comfortably without rolling downhill; it was a bit higher than the rest of the area to help keep us dry if it rained heavily; there was plenty of dead wood on the ground for building a fire; and there were trees the right distance apart for stringing a ridgeline for our shelters.

INTENSIVE CARE FOR FILTHY FIREARMS.

IT'S LIKE 9-1-1 FOR GUNS

In 60 seconds, Gun Medic blasts out anything that could hinder cycling, and leaves a trace of oil behind. It lets you keep shooting now, and do a thorough cleanup later. New from Hoppe's, the first name in protection for over 110 years.

HOPPE'S
www.hoppes.com

ONE-STEP CLEANER & LUBRICANT • EVAPORATES IN 60 SECONDS
HEAT/COLD RESISTANT FROM -65°F TO 500°F • BIO-BASED FORMULA

©2016

PLANNING THE BUGOUT SCENARIO



When planning a mock bugout trip, the following schedule will provide some structure:

Announce the bugout on Saturday morning.

Everyone should grab their bugout bags and go to the car—that is, if they already know what to do. Alternatively, this is the ideal time to train on that subject, as well as to learn which items to pack into individual bugout bags.

Drive to a parking lot in a nearby state park. Park the car there, because ... the road is allegedly “impassable,” and everyone will have to walk the rest of the way to get to the bugout site. Walk to the campsite or location in the forest you picked out ahead of time.

◀ Set up camp.

◀ Find water and purify it.

◀ Make a fire.

◀ Hunt or fish for dinner if the hunting/fishing seasons allow.

◀ Make dinner.

◀ Practice using a map and compass or GPS at night.

◀ Sleep.

◀ Get up and practice methods for purifying water so you can make breakfast.

◀ Make breakfast with freeze-dried or dehydrated food.

◀ Learn about plants in the area—especially how to identify poison ivy, sumac and oak.

◀ Learn about survival foods, such as cattails.

◀ For lunch, make bread from cattails and tea from sassafras leaves. Roast acorns, and eat ripe persimmons.

◀ Practice first aid scenarios interspersed among the other training tasks you planned to include during the trip.

➤ Adding a waist belt to your pack suspension will put the weight on your hips instead of your shoulders. This will allow you to comfortably carry more weight for longer distances.



GETTYIMAGES.COM/BY:HERO IMAGES

➤ State and national parks have fixed campsites that are perfect for setting up a base camp to serve as a safe haven when you are trying something new 100 feet into the woods.

This shelter-building exercise was a bit of an experiment. I wanted to see if the tarp from my camping hammock would work as a stand-alone tarp, and I also wanted to test out an emergency sleeping bag made from plastic film with a reflective metal coating. I was going to set up a simple lean-to with my hiking poles and the tarp and then set up the foil sleeping bag underneath it. A poncho would serve as my ground cloth.

I immediately had another teaching point about trying things out before you had to depend upon them in an emergency: The hammock tarp was not a rectangle, as I had assumed. Instead, it was a diamond



GETTYIMAGES.COM/BEVERLY HILL

shape with catenary (curved) sides. Consequently, I wouldn't be able to get it down on the ground in the back. With a little twisting, however, Debbie and I were able to get it set up.

The sleeping bag worked really well. With drawstrings on both ends, it could be set up as a tube or a sleeping bag or opened up as a wide blanket.

Debbie opened it up and lay down on the aluminum-colored side to see what it felt like. In less than a minute she sat up and was amazed at how quickly it started reflecting her body heat back to her. It would definitely work well to keep someone warm at night. (If, in future testing, it doesn't develop condensation from perspiration, it will become a standard piece of kit in my bugout bag.)

DEBBIE'S CHALLENGE

Debbie's challenge was fire. She had used a camping stove and made campfires with firestarters before, but she had never done it with just what she could find in the woods and a match.

I told her it was necessary to mix heat, fuel and oxygen to make a sustainable fire. We walked around and collected the different

"A BACKPACKING TRIP TO A SAFE OUTDOOR LOCATION IS A GREAT WAY TO RUN THROUGH VARIOUS SCENARIOS YOU AND YOUR FAMILY MIGHT FACE DURING A BUGOUT OR EMERGENCY."

sizes of wood she needed to build her fire. Her fire lay was a combination of lean-to and tipi shapes. Once she had it laid, she looked at me for my approval and lit the match.

The tinder lit and, after a minute, the kindling lit up—and so did her face. With the addition of slightly larger and larger pieces of wood, the fire grew in strength. In a few minutes, she had a great fire going that helped stave off the cold temperatures the night had brought.

Some more map and compass work brought us back to our campsite, where we packed up camp and then walked along the loop road back to the park headquarters to check out. I took this last opportunity to give my kids more land navigation practice and do some terrain association.

We took an azimuth from the park headquarters to the top of a ridge, which we then followed down to the highway where we had left the car. Because we knew the ridge crossed the highway to the west of the car's location, we turned east at the highway and followed it to our car.

Two hours later, we pulled into our driveway. The three of us walked into the house, smelling of campfire smoke and full of stories and pictures from our weekend adventures.

All in all, our trip proved to be a great way to test our skills and gear, see what works and doesn't work, learn from our mistakes without putting ourselves in danger, and build confidence. Remember that the same kind of training and evaluation can be done at home—but with a whole different set of challenges. **ASG**



Over 600,000 Customers Served Since 1998

- ★ FDA-approved medications from USA Pharmacies
- ★ Licensed USA Telemedicine Physician Network
- ★ Call 7 days per week



HABLAMOS ESPAÑOL - CALL TOLL FREE -

VIAMEDIC® 888-467-0693

Visit Viamedic.com/GUNS for special offers



MOST VALUABLE PERFORMER

**WITH ITS MVP SCOUT, MOSSBERG FOUND A
WAY TO STAND OUT IN A CROWDED FIELD**

STORY AND PHOTOS BY BRAD FITZPATRICK



In the early 1980s, Jeff Cooper, already a legend in the shooting industry, designed an all-purpose rifle that was short in overall length, easy to handle and maneuver, and offered a wide field of view—thanks to the addition of a forward-mounted optic. The design became known as the Scout rifle, and for more than 30 years, fans of this rifle platform have been heaping praise on Cooper's design.

AN ADDITION

It took awhile for the mainstream shooter to jump on board with the notion of a Scout rifle, but over the past few years, the popularity of Cooper's original design has grown. That prompted gun companies to design and market their own versions of the Scout prototype, all of which were similar in overall concept but differed in action, stock design and minor features.

In 2015, Mossberg offered its own version of the Scout rifle as part of its new and growing MVP line of guns. The rifle became known as the MVP Scout, and its Cooper-inspired heritage was unmistakable.



◀ The Mossberg is affordable and accurate, making it a great choice for all-around hunting. The synthetic stock is light and impervious to the elements, and the rifle ships with a padded sling.



◀ The MVP Scout rifle is perfect for tough conditions such as hunting elk in a snowstorm. Many hunters think all elk country is wide open, but that's not the case. The MVP Scout is ideal for sorting out bulls in thick junipers.



◀ The MVP Scout comes with an oversized bolt handle that is easy to find for fast reloads. The safety is a two-position rocker-type design that allows the rifle to be loaded and unloaded with the safety on. Note the ghost ring rear sight under the optic.



◀ If you're going to spend a lot of time walking and stalking, you need a light rifle. When an animal suddenly appears in front of you, it's critical to have a rifle you can shoot accurately and quickly. The Scout design is perfect for that, and Mossberg's version adds the versatility of magazine exchanges with other popular 7.62x51 rifles.

**“WITH AN MSRP OF \$738, IT’S ALSO
ONE OF THE MORE AFFORDABLE
SCOUT OPTIONS ON
THE MARKET.”**



FIRST LOOK

The Mossberg rifle has a 16.25-inch bull barrel that is threaded and comes with a flash suppressor installed, as well as an 11-inch extended top rail with a ghost ring rear and fiber-optic front sight, which is in keeping with the original Scout design. Cooper believed, and most other shooters agree, that the ghost ring rear sight offers quick target acquisition while maintaining a higher level of precision than standard iron sights. That extra rail space offers plenty of real estate for mounting an extended eye relief scope, and Mossberg even offers its MVP Scout with an EER Vortex optic combo.

The rail starts at the rear of the receiver and extends to a few inches down the barrel, so if you choose to mount a traditional eye relief scope, that's not an issue—as long as it fits around the ghost ring.

The MVP Scout's stubby design (it has an overall length of just 37.5 inches) makes it a perfect brush gun and a great rifle for treestand hunting where a long barrel is a liability. The unscoped rifle weighs only 6.75 pounds and is chambered in the classic Scout cartridge—the 7.62x51/.308.

The Mossberg scout is dressed in black from muzzle to recoil pad, with a pillar-bedded black synthetic stock, matte-blued receiver and barrel, and a black top rail and magazine. The magazine design, itself, is where the Mossberg Scout first steps away from the competition.

One of the hallmarks of the MVP line is the interchangeability of magazines: You

can use either an MIA or AR-10 magazine in the Mossberg, and it won't compromise function. So, if you already have one of those rifles, it's an easy transition to the Scout.

In addition to the top rail, the MVP Scout comes with two side-mounted rails for adding accessories, and the gun comes standard with Mossberg's LBA bladed trigger system that is adjustable from 3 to 7 pounds.

The stock has textured panels that are comfortable to grip, even with ungloved hands, yet offer a firm hold on the gun. The bolt release button is located on the rear left side of the receiver, and the large opening at the rear of the bolt allows you to quickly determine whether or not the gun is cocked. The bolt handle is oversized and easy to find, making rapid, controlled reloads fast and easy. There's also a wide, padded Mossberg sling included when you purchase the rifle.

The recent wave of super-accurate, affordably priced bolt-action rifles has changed the market forever. Now, sub-MOA guns don't start at \$1,000 but at less than half that price, so the stakes have never been higher for gun makers to produce firearms that perform.

At the heart of the MVP Scout is Mossberg's push-feed bolt design, which incorporates a dual-opposed locking lug bolt with a plunger-type ejector that is specially designed to work flawlessly with AR-10 and MIA magazines. The result is an interchangeability of magazines that makes the Mossberg one of the most versatile of all Scout designs.

So, what's the Scout good for? In short, just about anything you need from a bolt-action rifle. The platform is light and handy enough to make the Scout a great deer and bear gun, and hog hunters will appreciate the high capacity and oversized bolt handle. The MVP Scout is equipped with a two-position, rocker-type safety, and the gun can be loaded and unloaded in the "safe" position.

For close-range shooting, the iron sights work very well, and that's part of the design of this defensive-minded bolt gun. With a reflex sight, you could stretch things out to moderate ranges, and a magnified optic allows you to take advantage of all that the versatile .308 offers.

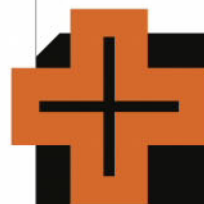
The Scout shoots extremely well from the bench, too. The stubby barrel lowers velocities—compared to, say, a 22-inch pipe, but it's still an effective hunting cartridge. From a vice at 100 yards, the rifle printed groups that were just over an inch with Hornady's 168-grain Match ammunition. With Nosler Partition 165-grain hunting loads, group size averaged 1.58 inches with an EO Tech red-dot sight with a 5x magnifier.

Trigger pull is good, thanks to the effective LBA design, and the trigger on my test rifle broke at around 3.5 pounds from the factory. Recoil from a .308 isn't severe in most any rifle design, but the MVP Scout helps reduce that rearward punch because of a sturdy recoil pad that absorbs much of the blow.

IN ACTION

I had a chance to test the MVP Scout on a Montana elk and mule deer hunt at the historic Jumping Horse Ranch. On the first morning in the Madison Range, a snow squall socked the mountains in a gray cloud of swirling flakes. It made visibility tough and required

◀ The Mossberg MVP Scout is short and light—the perfect rifle for hunting in dense cover, but it also works well in wide-open spaces.



SOURCES

- ◀ **O.F. MOSSBERG & SONS**
(800) 363-3555
MOSSBERG.COM
- ◀ **TRIJICON**
(800) 338-0563
TRIJICON.COM
- ◀ **UNDER ARMOUR**
(888) 727-6687
UNDERARMOUR.COM
- ◀ **WALLS**
(844) 259-2557
WALLS.COM



◀ The MVP Scout comes with a fiber-optic front sight that blends well with the ghost ring rear. The 16.25-inch barrel is threaded and comes with a suppressor.

◀ The MVP Scout's 11-inch-long top rail offers plenty of room for mounting optics. In this case, the author used an EO Tech red-dot sight with 5x magnifier. This combo worked very well in Montana.

“THE MAGAZINE DESIGN, ITSELF, IS WHERE THE MOSSBERG SCOUT FIRST STEPS AWAY FROM THE COMPETITION.”

SPECIFICATIONS

Mossberg MVP Scout

- › **ACTION:** Bolt-action centerfire
- › **CALIBER:** .308/7.62x51
- › **CAPACITY:** 10
- › **WEIGHT:** 6.75 pounds
- › **BARREL:** 16.25 inches
- › **OVERALL LENGTH:** 37.5 inches
- › **STOCK:** Black synthetic
- › **FINISH:** Matte blue
- › **SIGHTS:** Ghost ring rear/fiber-optic front
- › **MSRP:** \$738

a lot of steep climbing on icy terrain. Having a light, short rifle such as the Scout made it easier to work my way through the snow-covered rock scramble as we searched for the elk.

The winds were unsteady. And even though we knew the elk would be hanging out on the edge of the trees as they moved up from the

lower elevation where they had spent the night, the odds were good that we would land almost directly on top of the herd before we knew they were there.

And that's exactly what happened. My guide, Ray, stooped down behind a snow-covered rock and turned back toward me.

"There are two bulls right up there. And they're close."

I knew that meant the elk were within 150 yards, because visibility was nil beyond that range. That also meant the elk were likely aware of our position and that they would be paying close attention for any movement.

I eased the shooting sticks under the stock of the Mossberg, lifted the rifle and myself into position, and started scanning through the blowing snow.

There were two tan bodies against the hillside above us, and although I couldn't see antlers, the general size of the animals meant I was looking at a pair of bulls. All I could make out of the antlers was the curve of one main beam.

I asked Ray if the bulls were shooters.

He studied the animals and finally made the decision that the one on the right was a pretty good bull with four or five points per side. I centered the rifle on the bull's shoulder, aware that the elk would not stand still trying to identify us much longer, and found the curve of the trigger.

Through the EO Tech optic, I could see the bull rise up and twist at the sound of the shot; he was hit hard. He turned and made it just behind a juniper before I could cycle the action and put a follow-up shot in the opposite shoulder. I watched as the first bull rushed up the hill into the trees, but I never saw the second elk.

We found the bull piled up behind the juniper bush. The 165-grain Partition had hit just behind the shoulder and worked to perfection, retaining its weight and dropping the bull within a few steps.

Later in the week, the snow eased, but bitter-cold winds from Canada continued to sweep in over the Madison Range, dropping temperatures into the single digits. That was good news, because the cold increased mule deer rut activity and pushed more big bucks down out of the high timber to lower elevations along tree line.

A large drainage cut down from the mountain, and at lower elevations, the creek was lined



GEAR FOR HIGH- COUNTRY HUNTS

If you're thinking about hunting game in the high country, it's important to be prepared before you head out. Elk and mule deer hunts at high elevations demand a high level of physical endurance, as well as the right gear.

On my elk hunt, I wore Walls 10X Lockdown Softshell pants and the company's Insulated Hooded Parka, which worked very well in the cold and snow.

Good footwear is extremely important, as well, and on this hunt, I was wearing a pair of Under Armour's Ridge Reaper boots, which are lightweight and waterproof yet provide plenty of traction and the ankle support you need when traveling in rough terrain.

A set of sturdy shooting sticks helps you stay on target, and they'll also act as support in steep terrain and help you get into position for a shot. One of the keys to success on any high-mountain hunt are good optics, so, in addition to the EO Tech sight on my rifle, I carried a Trijicon HD 10x binocular, which provided a clear view with excellent color transmission.

with cottonwoods. That was a favorite place for the mule deer to congregate, and two days after I took my elk, I saw a group of mule deer does running from a group of bucks in the bottoms.

One buck, in particular, was larger than the rest. He was dark in color and carrying an impressive crown of antlers. Jeff, the manager of the Jumping Horse, served as my guide that day, and we made a wide arc to get above the deer and stay downwind.

When we crested the ridge, the deer herd was moving through the cottonwoods. The largest buck stayed hidden in the trees, but when a smaller forkhorn started chasing a doe, the old buck slipped out of the cover, offering me a clean shot.

I centered the Mossberg on my pack as I lay prone. When the buck stopped in the open, I pressed the trigger. I could see the deer was hit hard, but as he turned and stopped, I delivered one more shot, and he was down.

As it turned out, the second shot wasn't needed, because the first Partition had landed on the mark and would have dropped the deer. As it was, there was no chance of losing the deer, and Jeff and I had to work to drag it up out of the drainage and onto level ground.

MOST VALUABLE PERFORMER

The Scout platform is, indeed, very versatile, and, with so many options, it's hard to select the one rifle that will work for you. The Mossberg MVP makes a good showing, combining everything you love about the Scout platform with a great trigger and the versatility of different magazine options.

With an MSRP of \$738, it's also one of the more affordable Scout options on the market. Whether you're looking for a durable deer rifle, a defensive gun or plan to hunt elk and muleys in the high country, the Mossberg will perform quite well.

Then, again, Mossberg is a brand that has been combining reliable function and affordability for decades, so it's a given that the MVP Scout performs so well. **ASG**





DEFENSIVE DECOR

TACTICAL WALLS ADDS A NEW DIMENSION OF CONCEALMENT TO HOME FURNISHINGS

TEXT AND PHOTOS BY GARRETT LUCAS

Decorating my home has never been a priority for me. As with firearms (most of the time), function trumps beauty when it comes to home furnishings. In fact, the nicest single piece I have in my home is a Liberty Safes Presidential 50. A few years ago, I bought a nice set of living room furniture, and the only thing I kept thinking was, *I could have bought five really nice rifles and a few pistols instead.* Such is life.

However, when it comes to sprucing up the place, my thinking has changed in the past few months. I recently became aware of a company that provides certain furnishings for folks like me: Tactical Walls. It sounds like an odd name until you see what this company manufactures and offers to the public. Tactical Walls specializes in producing furnishings for the home that conceal valuables and keep firearms nearby in case they're needed in a defensive scenario, such as a home invasion.

Yes; I have a safe for my firearms, but I still leave a few firearms around the house. If something happens, you can't always make it to the safe; and even if you did, the time involved in accessing your firearms might be prohibitive for a rapid, defensive response.

However, leaving firearms in various rooms around the house leaves them open to being

stolen if someone burgles your home. The items sold by Tactical Walls allow you to at least conceal them when you're away from home or entertaining visitors. It's sometimes awkward to explain to house guests why that Glock 21SF is in the bathroom magazine stand. (Well, it depends on the guests.)

A FEW ADDITIONS

Tactical Walls offers a good variety of products that will fit into just about any home. The company offers mid- or full-length mirrors that slide to one side to allow storage of valuables and firearms in the recess of the wall. There are also shelves in a variety of sizes—and even a Tactical Lamp!

To keep things relatively simple, I went with one of Tactical Walls' concealment shelves, the Tactical Lamp and Tactical Wall Clock. While I like the appearance of function of the Concealment Covers line, I'm not a person who should be cutting holes out of walls.

At least that was my original thinking. Now that I've had a chance to try out a few of the company's products, I believe I will be going with a couple of its Concealment Covers, as well. (I only hope I don't end up busting into my neighbor's living room.)

SOURCE

- **TACTICAL WALLS LLC**
(540) 298-8906
- WWW.TACTICALWALLS.COM



◀ Left: The "keys" to the Tactical Wall shelf (1242 RLS) look like knobs and contain magnets that engage the locks in the shelf. Each knob has to be held at the front corners of the shelf and pushed up slightly to engage the lock; then, the bottom will lower to provide access to the user's gear. (Photo courtesy of Tactical Walls)



◀ With the lower portion of the shelf locked in place, it looks like an elegant furnishing, offering no hint as to what lies inside. (Photo courtesy of Tactical Walls)



◀ The 42-inch-long foam pad has adhesive on the back to secure it in the shelf. But first, the pad has to be cut to fit the gear you intend to conceal in the shelf.



➤ Built into the interior of the shelf lower are two pneumatic struts (one at each end) that gently lower the bottom to reveal the stored gear or valuables.



1242 RLS Wall Shelf

Specifications

- Maximum weight load: 20 pounds on shelf and 20 inside
- Material: Finished pine and poplar wood
 - Width: 50.75 inches
 - Height: 5 inches
 - Depth: 14.5 inches

MSRP: \$395

1242 RLS

I decided to work on the 1242 RLS (Rifle-Length Shelf) first, because it was the most complicated to set up. I say, “complicated,” only because the other two items were a lamp and a clock.

The 1242 RLS comes in a variety of finishes, including walnut, cherry, early American and black. The company provides all the hardware needed to mount the shelf on the wall.

It took a little doing, but I managed to get it installed quickly enough. Because of the shelf’s interior length, I was able to mount it on two studs. I live in an older home, and although everything wasn’t on exact 16-inch centers, the length was still enough to find two that would work. I had to work on the centering a bit to make sure the brackets would be evenly spaced from both ends.

When installed properly, the shelf is rated for a 40-pound load—good enough to carry a decent amount of gear you need to access quickly. The model I received uses a magnetic lock. The keys look a bit like drawer knobs, and they have magnets inside of them. When you want to open the shelf, you hold one key to each of the two front corners, push up slightly for the magnets to engage, and the shelf will then open.

On the 1242 RLS, there are two pneumatic struts (one on each end) that gently lower the bottom of the shelf into the open position, from which you can easily access your gear. Some of the small shelves have only one strut because of their lower weight ratings.

Contained inside the shelf is a foam pad that measures 42x12x1.5 inches. This foam pad holds the gear you decide to keep in the shelf. Once you have done that, you can custom fit the pad by cutting out the shapes of the gear you’re going to conceal. This can be done with a simple razor blade: You trace around the items carefully to ensure a tight fit and a uniform depth of cuts.

The important thing is to take your time and not cut too deeply. You don’t want to sink your gear too far into the foam, because that could affect the integrity of the bottom, where there is adhesive on the reverse side.

The shelf I installed has the cherry finish on the top and black on the bottom. It’s actually an attractive piece. It’s built solidly, and the lines come together tightly and straight. The instructions Tactical Walls provided were clear and helpful, and the internal mechanisms worked cleanly, both in unlocking the shelf and lowering the bottom to its open position.

The 1242 RLS is definitely worth having in the home and works well at keeping firearms concealed until they are needed. As mentioned, the model I received works with magnetic keys, but Tactical Walls is just now introducing shelves that will unlock via an RFID card. I haven’t tried it yet, but it will be interesting to see which unlocking mode people prefer.

“TACTICAL WALLS OFFERS A GOOD VARIETY OF PRODUCTS THAT WILL FIT INTO JUST ABOUT ANY HOME.”

TACTICAL LAMP

It seems that everything has to be “tactical” these days to be considered “cool,” so why not have a tactical lamp? I will admit, though, that I very much like the implementation of this design. The first reason is because it’s so easy to set up; the second is that this lamp provides the quickest firearm access of all those I’ve tried from Tactical Walls.

Even I didn’t need instructions for this one: Install the lampshade bracket onto the base, and then screw on a closed nut to hold the lampshade in place (and install a light bulb, of course). Once done, plug it in, and you’re good to go. The whole thing takes about three minutes.

The Tactical Lamp I received also has the

Tactical Lamp

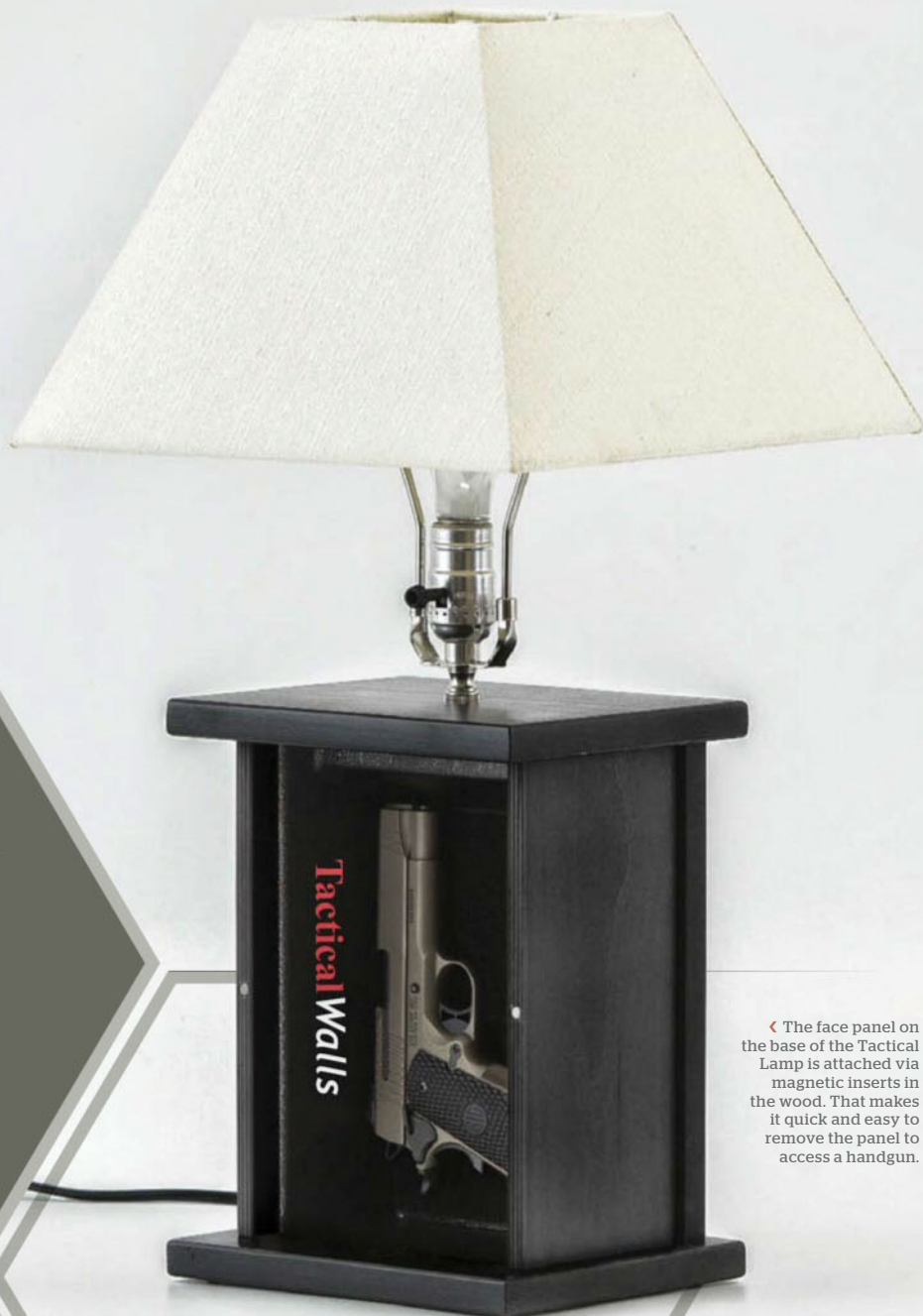
Shade

- Material: Linen
- Width: 6 inches at top, 13 inches at bottom
- Height: 9 inches

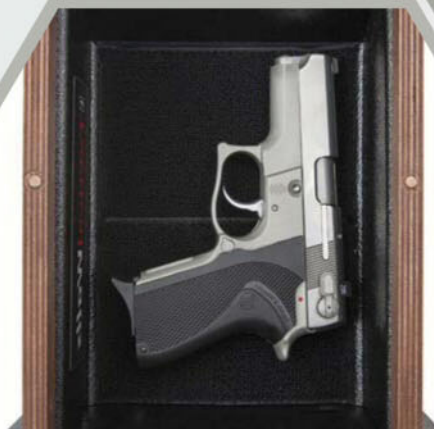
Base

- Material: Poplar and birch wood
- Width: 9 inches
- Height: 9 inches
- Depth: 7.25 inches

MSRP: \$119



◀ The face panel on the base of the Tactical Lamp is attached via magnetic inserts in the wood. That makes it quick and easy to remove the panel to access a handgun.



◀ The base on the Tactical Lamp is lined in the back with hook-and-loop strips for use with tactical gear, and there is a large magnet in the back that can be used instead to secure the firearm.

› The Tactical Lamp, completely assembled with the front panel in place

› The finish on the Tactical Lamp I received was cherry with black accents to match the 1242 RLS shelf. It is also available in other finishes to match almost any home.



“FOR THOSE WHO DON’T HAVE THE ROOM FOR A LARGE SAFE OR WHO WANT TO KEEP FIREARMS AROUND THE HOUSE OUT OF VIEW BUT READILY AVAILABLE, TACTICAL WALLS HAS THEM COVERED—LITERALLY.”

cherry and black finish to match the shelf I installed. The beauty of the lamp is the quick access to a firearm. The front face of the lamp’s base is held on by magnets. To access your handgun, simply pluck the front of the lamp base off, and grab the firearm. There is no locking mechanism on the Tactical Lamp; it’s built for simple concealment.

The interior of the lamp base is lined with soft hook-and-loop strips, so you can mount items (such as holsters) inside with the hook side on them. For even a compact handgun, there doesn’t seem to be much room to maneuver a handgun out of a holster. It might work with a subcompact, but I’d prefer using the XL magnet at the back of the interior, which will hold your handgun in place.

The magnet is on the back side of the insert so that your firearm only comes into contact with the hook-and-loop strips. The magnet is strong enough to hold a handgun in place for easy access. I tried securing a few models with the magnet, including an S&W 6906, Glock 19 and a Colt Lawman MK III revolver. All stayed securely attached to the back.

As on the 1242 RLS, the workmanship on the Tactical Lamp was clean and appealing. Everything fit together nicely, and the different parts (lampshade and base) complemented each other to make an attractive package overall. For something this simple, I was almost as stoked about it as I was with the shelf. As with real estate, what matters is “location, location, location,” and I have the lamp in a perfect spot to quickly retrieve a firearm if the need arises.

TACTICAL WALL CLOCK

The last item in my Tactical Walls inventory is the Tactical Walls Clock. I guess I wasn’t paying close attention to its dimensions, or my mind wasn’t able to process the scale properly: Straight up, this clock is huge—the part that is installed against the wall is 22 inches in diameter.

The insert where the gear is stored is 14x10 inches and 3.5 inches deep. It’s quite a roomy storage area that can easily store two handguns if needed. Or, you could store a

handgun, spare magazines, a flashlight and a knife, if so inclined. There’s plenty of room to work with inside the insert.

The shell of the clock is made of ABS plastic with a faux woodgrain finish. The face of the clock is a canvas print, which you can get with either Roman numerals or Arabic (regular) numbers. To be honest, the canvas face of the clock was the least well-finished item in all the Tactical Walls items I inspected.

The top two-thirds of the face is fine, but the lower third has a lot of dark smudging. It almost looks as if the bottom part of the face was rubbed against something before the ink was dry. The face came in plastic wrapping, so I don’t know where or how this could have occurred.

Other than that, the clock lived up to expectations. There was some assembly required to install the clock mechanism to the face, but that took just a few minutes to do. The face installs on the base of the clock via a hook-and-loop strip on the back side of the face, which hooks onto a hook-and-loop strip at the top of the base at the 12 o’clock position.

Once the face is in place, it's a simple matter to retrieve the items stored inside. There is a recess in the clock base behind the 12 o'clock number. By pressing in on the 12 o'clock area, the bottom of the face swings out to allow you to slip your hand under the face or remove it entirely.

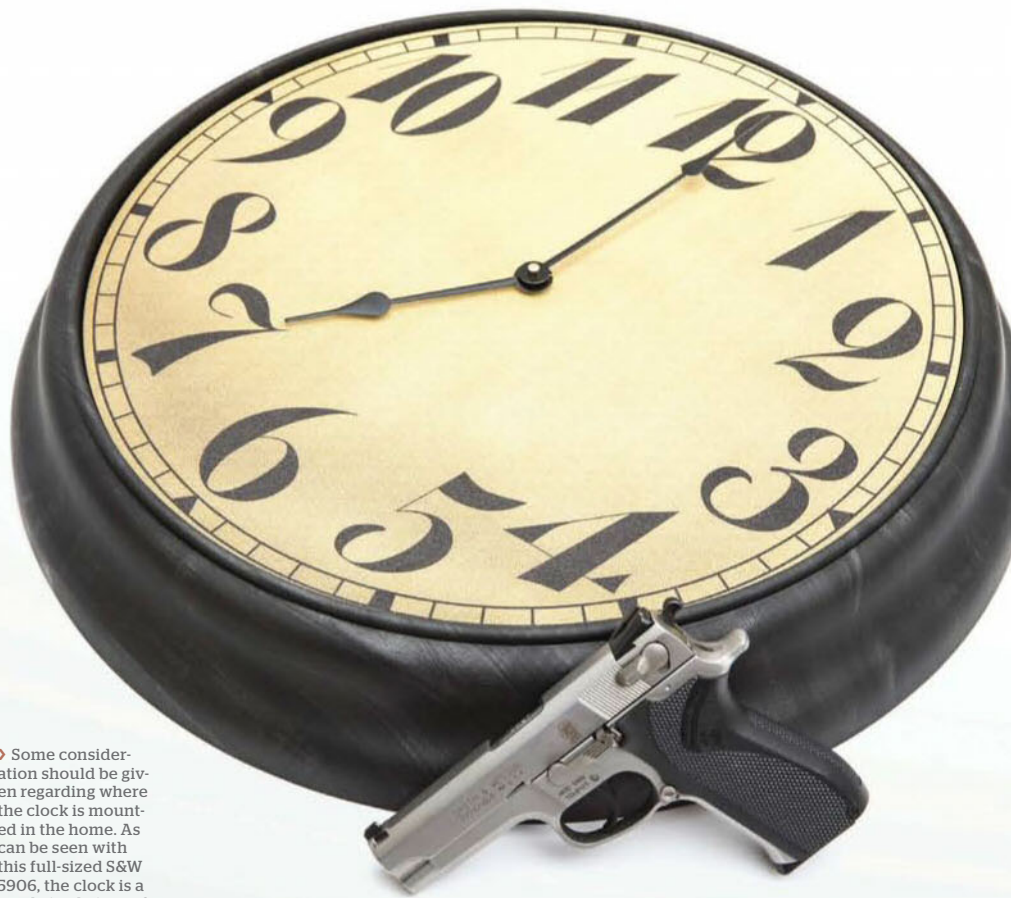
As on the Tactical Lamp, the interior of the clock insert is lined with hook-and-loop strips. A holster with a hook strip can be attached so the firearm is secured in place. The other option is to use the two supplied large magnets to secure the firearm. The magnets can be attached to the reverse side of the insert with adhesive strips.

DECORATING TIPS

No, my place won't be on the cover of *Better Homes and Gardens* any time soon, but the additions I made with the products from Tactical Walls enhance my home. They most definitely improved my ability to hide firearms in different parts of the house—while still keeping them readily accessible.

The construction of the products is

› Some consideration should be given regarding where the clock is mounted in the home. As can be seen with this full-sized S&W 5906, the clock is a good-sized piece of décor.



Tactical Wall Clock

Specifications

- Maximum weight Load: 10 pounds
- Width: 22 inches
- Height: 22 inches
- Depth: 3.5 inches
- Material: The face is a canvas print. The body is ABS plastic.

MSRP: \$175

strong and clean, and they are finished nicely for a very attractive appearance. Additionally, for those folks interested in doing their own custom jobs, Tactical Walls sells a wide variety of inserts that can be fitted into walls behind paintings, personal pictures and other items.


For those who don't have the room for a large safe or who want to keep firearms around the house out of view but readily available, Tactical Walls has them covered—literally. From concealment covers for wall-recess storage to shelves in different sizes and finishes, you're sure to find something that meets your needs and that will also fit nicely in your home. **ASG**

◀ Near left: The insert in the Tactical Wall Clock has plenty of room for extra items; alternatively, a holster with a hook-and-loop strip can be attached to the back of the insert.



◀ Far left: Magnets can be attached to the back of the clock insert to secure the firearm in place.





MKA1919 MATCH & MKA1919 MATCH PRO
Semi-Auto Shotgun
SKU: 700000 & 700020(PRO)
Bbl-18.5"; OAL-37.95"; Weight-8.2 lbs.
12Ga.; 3"; Capacity 5+1

The MKA1919 MATCH[™] is a magazine-fed, semi-auto, AR-style shotgun. Feeds and functions with 12ga 3" or 2³/₄" shells. The MKA1919 MATCH series received many improvements from that of its predecessor.

Upgrades and Improvements Include: Ambidextrous Safety, Extended Bolt Release, Extended Magazine Release, Redesigned (Bolt, Locking Bolt, and Action Bar), Metal Floating Feed Ramp, two Gas Rings (Heavy Loads or Light Loads) and an easy take down system.

After extensive testing, we feel the MKA1919 MATCH is a semi-auto shotgun that is designed, built and functions to meet the requirements of the demanding 3-Gun competition. EAA Corp now offers an "out-of-the-box" 3-Gun shotgun that competes with custom shotguns costing three times as much.

EUROPEAN
EAA
CORP
AMERICAN ARMORY CORPORATION

If your dealer cannot get you an MKA, ask them to email us for more information at eaacorp@eaacorp.com or write to us at:

European American Armory,
P.O. Box 560746
Rockledge, FL 32956.



TO LEARN MORE VISIT WWW.EAACORP.COM/SURVIVAL

Always Abide by all local & federal laws concerning firearms ownership, handling, storage & safety



GETTYIMAGES.COM/RYBARTOSZ HADYNAK

ONE VETERAN'S
AUTOMOBILE
SURVIVAL KIT

BY CHRISTOPHER NYERGES

GET- HOME BAG

› Tsunokai with his "get-home" bag

"HIS MILITARY BACKGROUND TAUGHT HIM HE COULD NOT ALWAYS EXPECT AN IMMEDIATE RE-SUPPLY OR BACKUP AND THAT HE SHOULD BE PREPARED TO HANDLE A SITUATION BY HIMSELF."

Everyone has an opinion about what constitutes a "survival kit."

Most backpacking stores provide you with a very specific list of what you should have in your personal survival kit, but that list is based upon what they want to sell you, not necessarily what you need. In fact, there is no "final word" on survival kits. The best ones are custom made to fit your personal needs, the situations dictated by the weather and your travel patterns.

All that said, here are the details of one man's automobile survival kit.

MARK TSUNOKAI

Mark Tsunokai is a 20-year veteran of the Army who specialized in light infantry and chemical warfare. He served two tours in Kuwait and one in Iraq.

Tsunokai always carries two plastic containers in the back of his pickup and explains how his military experience influenced both his decision to always carry a survival kit in the truck, as well as his choice of items:

"Most of the military and civilian jobs I've had were quite a ways from home, especially when I was living in San Diego," says Tsunokai, who realized he should always be ready for a breakdown or other disruption.

His military background taught him he could not always expect an immediate re-supply or backup and that he should be



› Some of the contents of box number two. Tsunokai reaches for the spare fuel can.

"TSUNOKAI'S KIT CONSISTS OF TWO PLASTIC BOXES AND ONE DAYPACK, WHICH HE CALLS HIS 'GET-HOME' BAG."



prepared to handle a situation by himself. And because he often trained in austere situations, he attempted to select gear that had as many uses as possible.

Tsunokai's kit consists of two plastic boxes and one daypack, which he calls his "get-home" bag.

THE AUTO GEAR BOX

All the contents for this box can be purchased for between \$150 and \$200. In it, he carries the gear that everyone in a car should have just to take care of the expected needs of travel. He has jumper cables, road flares and gloves. He carries chains, because sometimes, he drives in snow country. He also carries a bag of kitty litter, which he has found gives him a bit more traction when stuck in the snow.

The box also contains a black bag he



◀ A look at what's in the mini survival kit

"THE BEST [SURVIVAL KITS] ARE CUSTOM MADE TO FIT YOUR PERSONAL NEEDS, THE SITUATIONS DICTATED BY THE WEATHER AND YOUR TRAVEL PATTERNS."

purchased as a unit (for about \$70). It includes some smaller auto gear, such as a can of Seal-a-flat, reflector tape, rags and a little compressor to fill up the tires.

BOX NUMBER TWO

This box weighs about 45 pounds, and all of it costs under \$100. In it, Tsunokai carries an original Esbit stove with fuel and a cooking pot. (For those unfamiliar with Esbit, this is a stove that folds down when not in use to about the size of a pack of playing cards.) He carries a gallon of water and two Mountain House entrees. Also included are a spare fuel can, large outdoor blanket, Gerber multi-tool, folding shovel and a large cloth signaling panel.

◀ Tsunokai shows flares from his auto gear box.

“... BECAUSE [TSUNOKAI] OFTEN TRAINED IN AUSTERE SITUATIONS, HE ATTEMPTED TO SELECT GEAR THAT HAD AS MANY USES AS POSSIBLE.”

› The Deluxe Tool Kit, made by Ultimate Survival



› A pre-made first aid kit



THE “GET-HOME” BAG

We’ve all heard of a “bugout” bag—the bag you grab in an emergency so you can evac out to who knows where. Tsunokai carries a far more realistic bag; he calls it the “get-home” bag. It’s a North Face backpack.

“I chose this particular pack because it’s less boxy, but tall and narrow,” explains Tsunokai. “If I had to abandon my vehicle, I’d put on this pack to get home.”

It seems as if there’s a lot in this pack, but it only weighs 22 pounds.

Here’s a list of what’s in Tsunokai’s “get-home” bag:

› A view of some of the contents of the “get-home” bag

“IT SEEMS AS IF THERE’S A LOT IN THIS PACK, BUT IT ONLY WEIGHS 22 POUNDS.”

- ‹ ROLL OF FIRST AID TAPE
- ‹ TWO OF THE LATEST MILITARY COMBAT BANDAGES; \$6 EACH
- ‹ SAWYER FIRST AID KIT; \$20
- ‹ TOILET PAPER
- ‹ ONE LARGE MILITARY SPACE BLANKET. IT IS NOISY AND SHINY, SO IT IS USED ONLY IN NONTACTICAL SITUATIONS.
- ‹ YELLOW BIVVY SACK (TO COVER A SLEEPING BAG); \$20
- ‹ CHEAP (\$1) PONCHO
- ‹ 5 YARDS OF PARACORD
- ‹ LARGE ROLL OF DUCT TAPE
- ‹ GERBER FOLDING KNIFE
- ‹ GERBER MINI AX; \$30
- ‹ GERBER MULTI-TOOL; \$30
- ‹ GERBER BACKPACKING SAW; \$15
- ‹ KA-BAR KNIFE; \$45
- ‹ PELICAN M6 LITHIUM LED FLASHLIGHT, TWO SPARE BATTERIES; \$50
- ‹ DYNAMO PUMP FLASHLIGHT
- ‹ THREE LIGHT STICKS (ABOUT EIGHT HOURS OF LIGHT EACH)
- ‹ SPARE EYE GLASSES
- ‹ PAIR OF SOCKS, MILITARY WOOL
- ‹ PAIR OF GLOVES, MILITARY WOOL
- ‹ SCARF, MILITARY WOOL
- ‹ SUN HAT (ORANGE-RED ON ONE SIDE AS A DISTRESS SIGN)
- ‹ ONE FULL MRE MEAL AND A HEATER



FIND
MORE
FREE
MAGAZINES

[HTTP://SOEK.IN](http://soek.in)

“FOOD, WATER AND SOME FIRST AID ITEMS MUST... BE PERIODICALLY CHECKED AND REPLACED.”

- ◀ TWO MAINSTAY ENERGY BARS
- ◀ ONE DATREX ENERGY BAR (THE TYPE USED ON LIFEBOATS)
- ◀ EIGHT 4.2-OUNCE RETORT WATER POUCHES
- ◀ SAFEWATER WATER FILTER, CARBON BASED; \$20
- ◀ PLAYING CARDS WITH SURVIVAL TIPS ON ONE SIDE
- ◀ *AIR FORCE SURVIVAL MANUAL* (TSUNOKAI CHOSE THIS PUBLICATION BECAUSE IT CONTAINS ALL THE BASICS, IS PRINTED ON WATERPROOF PAPER AND HAS EASY-TO-READ TEXT)
- ◀ *COMPACT NEW TESTAMENT*
- ◀ YOU CAN SURVIVE—A MINI SURVIVAL KIT IN A CAN
- ◀ ULTIMATE SURVIVAL DELUXE TOOL KIT (CONTAINS A SIGNALING MIRROR, BLASTMATCH, WHISTLE AND WIRE SAW)

Tsunokai points out that his survival kit is not static and that if something doesn't meet his expectations in the field, he will get remove it and try something else. In addition, some things expire and must be replaced. The light sticks, for example, should be changed at least every five years. Food, water and some first aid items must also be periodically checked and replaced.

THE CANTEEN

Tsunokai also carries a 2-quart bladder canteen, which is collapsible when not in use. This can be obtained at a surplus store. Along with the canteen, he carries iodine pills for water purification.

"How can you test if the iodine pills are still good?" Tsunokai asks. He pulls one out of the pack. "If it's a steel-gray color, it's still good." When the pills turn brown, they are no longer good. In time, or when exposed to air, the pills will stick together or get crumbly and should be replaced.

Carrying these items in his vehicle has given Tsunokai peace of mind when traveling. **ASG**



◀ Tsunokai inspects his beautiful KABAR knife. (Don't leave home without it!)



◀ Food, MREs, reading material and more from the “get-home” bag



WHERE THERE'S **SMOKE...**

**ENOLA GAYE'S SMOKE
GRENADES—A MUST-HAVE TOOL
FOR THE TACTICALLY INCLINED
PREPPER**

TEXT AND PHOTOS BY GARRETT LUCAS





As survivalists/preppers, we have to think outside the box sometimes to come up with solutions to certain problems. Whether it's trying to come up with a cheaper way of preserving and storing food or piecing together a defense strategy for our homes, it pays to be open to other concepts in order to come up with solutions that meet our needs.

I recently came across Enola Gaye Grenade Company, a business in the United Kingdom that specializes in creating smoke grenades for law enforcement, the military and civilian sectors. I immediately knew I'd found a solution for a few ideas I'd been mulling over for a while. Although this company is based in the United Kingdom, its products are available through distributors in Canada and the United States.

After reaching out to the folks at Enola Gaye USA, it wasn't too long before I had a box of their products to try out for this review.

The Enola Gaye name is well-known for its products in different markets. One example is the paintball market. Smoke grenades are used in matches to provide a screen for team members as they take on other "combatants." Enola Gaye products have also been used extensively in the entertainment business, including movie production. These products are not toys or novelties; they are tools that can be used by preppers in a variety of ways—mainly to help them stay alive.

◀ The dimensions of the EG series of wire-pull smoke grenades approximate that of a soda can, but slightly longer.

"... BEING ABLE TO DEPLOY SMOKE FOR CONCEALMENT WHILE YOU MAKE YOUR GETAWAY WILL BE EXCELLENT INSURANCE TO HAVE ON HAND."

SMOKE 'EM IF YOU'VE GOT 'EM

Unlike the walnut-sized smoke grenades I used to get at Myrtle Beach when I was a kid, the smoke grenades available from Enola Gaye Grenade Company put out massive amounts of smoke. According to a company representative, the larger smoke grenades output approximately 60,000 cubic feet of smoke—a measurement that varies due to density, wind conditions and other factors. In fact, the company claims that one of its products dumps more smoke than any other commercially available smoke grenade.

We received a couple of different models of smoke grenades to review: the EG18 and EG18X. Each came in a variety of colors that we were able to try out in the field. The canisters are approximately 2.16 inches in diameter and 4.41 inches long. (Think in terms of a soda can that's slightly longer than normal.)

Each canister comes with a plastic cap, which covers the wire-pull device. The canisters are easily activated by removing the caps and pulling the wire down the side with a keyring-style loop. If you pull up on the loop, it will not activate the device and will probably render it inoperable.

You can set the canisters up on tables, drums, cinder blocks or other items to keep the smoke-dispensing end pointed up and off the ground. Or, you could go for realism by activating a canister and throwing it toward the general area that you want it.

If you plan to throw a canister, it will probably land on its side. Know ahead of time that you could get some black charring, and the dye color will bleed out a bit on the ground wherever it lands.

Enola Gaye references these devices as "cool burning," but you still have to be mindful of where the canisters land to avoid a fire hazard. The "cool-burning" description refers to the way the canisters burn on the inside; even so, some extreme heat still escapes the end(s).

COLORFUL RESULTS

The EG18 models have been popular for a while with those who play paintball, and the burn time on one of these is approximately 90 or 100 seconds. We tried a red one first

› The long-burning, blue EG18 canisters poured out smoke that had an almost iridescent sheen to it. It was highly visibly against ground cover, although it blended into the sky as it lifted higher into the air.



› The red EG18 put out a good deal of smoke during the approximately 90-second burn time. While highly visible, the smoke from the red canisters did not seem as dense as the smoke from the blue or white ones.

while practicing at the range to get a general idea of the amount of smoke that could be expected in one area outdoors. Then, we deployed two blue canisters at once.

I was immediately impressed with the amount of smoke from the first red container. It created a good screen for the general shooting lane we were practicing in, despite the fact that it was fairly windy that day. The two blue ones were thrown a few feet apart and provided a wider smokescreen. The blue is almost aquamarine and really stood out in the wooded setting. However, it does blend into a blue sky.

Even though I thought I was impressed with the first three canisters we tried, I had no idea what we were in for when we tried the first EG18X canister. The EG18X is designed to dump the same amount of smoke as the EG18 but in half the time. That means you're getting twice the amount of smoke per second and getting incredible density quickly for best concealment.

We were overwhelmed by the white smoke from the EG18X. With the wind whipping around, we were encircled by the smoke about halfway through the burn. It was so

› Once the cap is removed from the canister, the wire-pull device is revealed. To activate the canister, the wire-pull loop should be pulled down along the side, not upward.



dense that at one point, it was blocking out sunlight to our left and slightly behind us. Now, that was an impressive display!

One thing that should be mentioned at this point is that the density and amount of the smoke that's issued from each grenade depends on the color. Of the ones we tried, the white smoke was the densest and provided the largest amount of smoke. The red and blue provided high-contrast colors, but the density wasn't as great.

You can check the Enola Gaye website, which provides measurements for each device that include quantity, density and output speed. Although we didn't have these for review, it appears that purple and black "Assault Smoke" produce the highest-density smoke, and the purple grenades also dispense one of the highest quantities. These are ones I'm definitely going to try in the future.



◀ A few Enola Gaye smoke grenades might be great accessories to take along on the bugout trail or for a post-apocalypse trip to the store.

SCENARIOS

As a prepper, you've got to be ready to move at a moment's notice. Whether you're hitting the trail with a bugout bag or transporting the family and gear to a specific bugout hideaway, sometimes, that movement needs to be masked from the prying eyes of others—especially if they have ill intent.

If some world-changing disaster ever does occur, there will be people out there who won't hesitate to harm you or your family while trying to take what you have. During such encounters, being able to deploy smoke for concealment while you make your getaway will be excellent insurance to have on hand.

An EG18X canister would be the best option for this scenario, because it dumps a larger amount (volume of military canisters) of smoke in about 50 to 60 seconds. This provides ultimate concealment in a much shorter period of time than the standard models. Another option would be the BURST grenade that pours smoke from both ends in half the time as the EG18X. However, it doesn't provide the same volume or density of smoke.

While this might all sound fantastical, everything preppers do falls into that



› Combining the density of white smoke with the faster output of an EG18X canister provides fast and excellent concealment from threats while one moves about in the wilderness or the city.

‹ The EG18X canister was designed to push out the same volume of smoke as the company's military-grade smoke canisters for fast concealment on the field with just a tug on the wire-pull ignitor.

SPECIFICATIONS

EG18X

- › FUSE DELAY: Approximately 2 seconds
- › EFFECT: Massive, fast smoke output
- › EFFECT DURATION: Approximately 50 seconds
- › EFFECT COLOR: Varies
- › IGNITION TYPE: Enola Gaye Wire Pull
- › COMPOSITION WEIGHT: 40 grams
- › SIZE: 55mm (diameter) x 112mm (height)
- › AVAILABILITY: United Kingdom, Europe, United States
- › WATER-RESISTANT OUTER: Yes/partial
- › MSRP: \$14–\$15 for EG18 (varies with color); \$16–\$17 for EG18X (varies with color)



“THERE ARE JUST TOO MANY POSSIBLE USES FOR THEM TO NOT HAVE AT LEAST A FEW STOWED AWAY.”

category. We try to be ready for everything. Using smoke grenades is SOP for the military and police; why not for us? If the suggestion were to use ninja stars for self-defense, I would agree that it was just silly. But smoke grenades do have practical uses in tactical settings and with search-and-rescue situations.

Having a couple of the EG18 canisters stowed in a pack would be a great idea for those who like to hike, backpack or adventure outdoors. If lost or injured, an individual could ignite one of these canisters and use it as a rescue signal (if they believed the smoke would be visible to others, such as a search party or helicopter).

Enola Gaye offers several colors that stand out and are easily visible in natural terrain. In my estimation, the standard EG18 models would be the prudent choice for this type of use, because it has a longer burn time (90 to 100) seconds, allowing it to be used more effectively as a signal.

The canisters are partially water resistant because of the plastic wrap around the body, but water could get through on the ends. If you are carrying them in inclement weather, it might be a good idea to place them in a ziptop bag or other weatherproof container. Aside from that, the Enola Gaye smoke grenades have an official shelf life for the Department of Transportation of four years; however, a company representative said 10-year-old products have been used—with no issues.

CLEARING THE AIR

Had I known that smoke canisters of this quality were available to the public, they would have been a part of my preps a long time ago. Further, they would have been standard gear in my get-home and bugout bags. There are just too many possible uses for them to not have at least a few stowed away.

We were impressed with the quality and construction of the smoke grenades, and in the short time we had to work with them, we were impressed by the offerings they had, as far as burn times, color and

› The red smoke is highly visible—making it a perfect color, along with orange—to signal for a rescue group.

In the author's opinion, the longer-burning EG18 would be better for signaling, because the smoke would be issued for a greater duration of time.



density are concerned. Each type could be used for specific situations, according to which best fits the need.

Enola Gaye has recently added the black "Assault Smoke" to its list of products. This item would be worth checking out, because it is new, even to those already familiar with the company's products.

If you're a hardcore prepper with an active imagination, you'll definitely find a way to put these quality products to use. It's another tool at our disposal that could help improve our chances of surviving what lays ahead. **ASG**



CONCEALMENT SOLUTIONS FOR EVERY SCENARIO



STEALTH

COVERT OPERATIONS BACKPACK

- + Discreet rifle transport
- + Modular interior
- + Concealment holster
- + Everyday pack utility

NEW COLORS AVAILABLE

SURVIVE THRIVE

TOLL FREE 866.340.2778
ELITESURVIVAL.COM

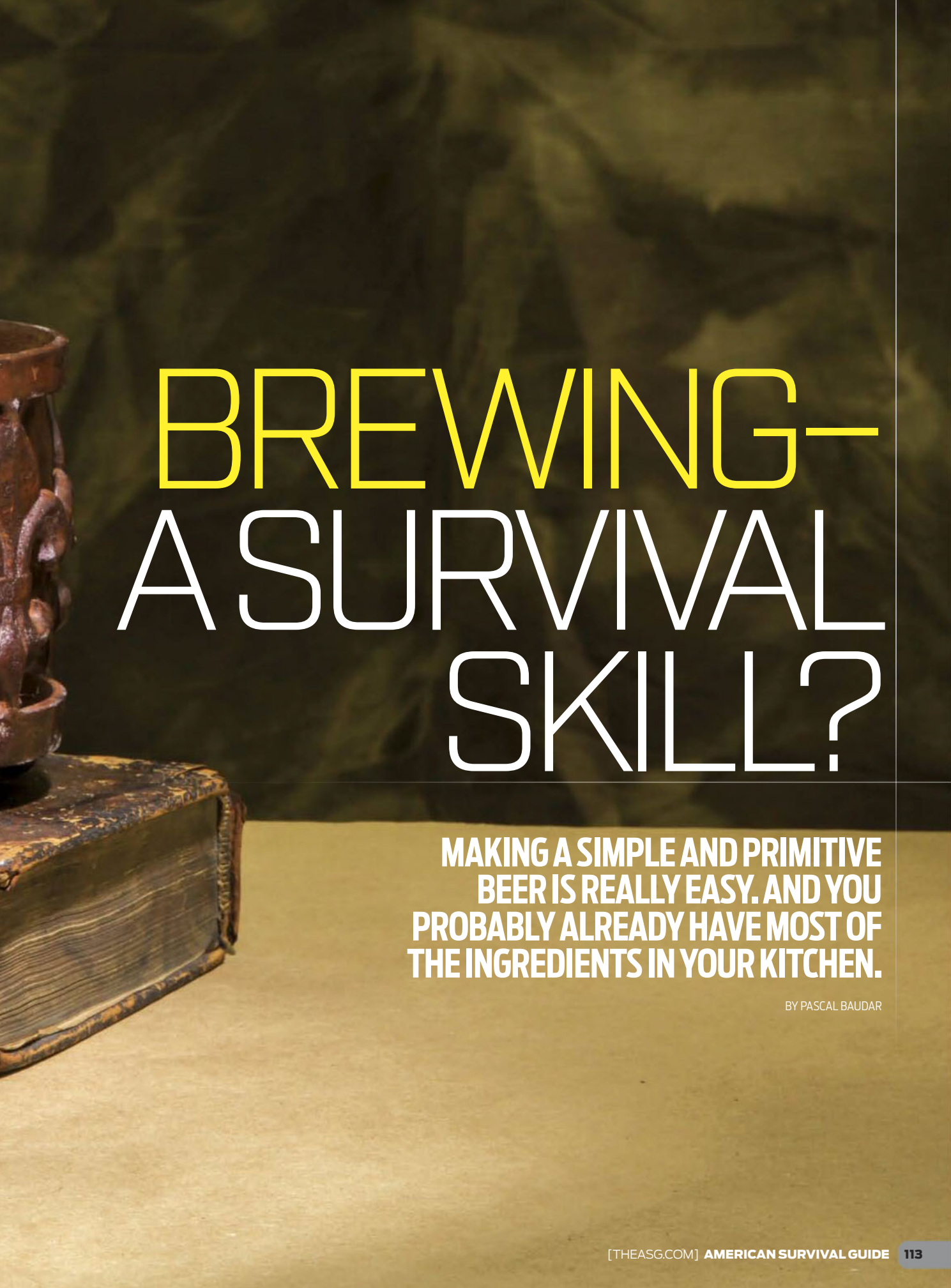


SOURCE

- › ENOLA GAYE U.S.A.
(702) 409-8193
- › WWW.US.ENOLAGAYE.COM



GETTYIMAGES.COM/BY:TRAVIS OWENBY



BREWING— A SURVIVAL SKILL?

**MAKING A SIMPLE AND PRIMITIVE
BEER IS REALLY EASY. AND YOU
PROBABLY ALREADY HAVE MOST OF
THE INGREDIENTS IN YOUR KITCHEN.**

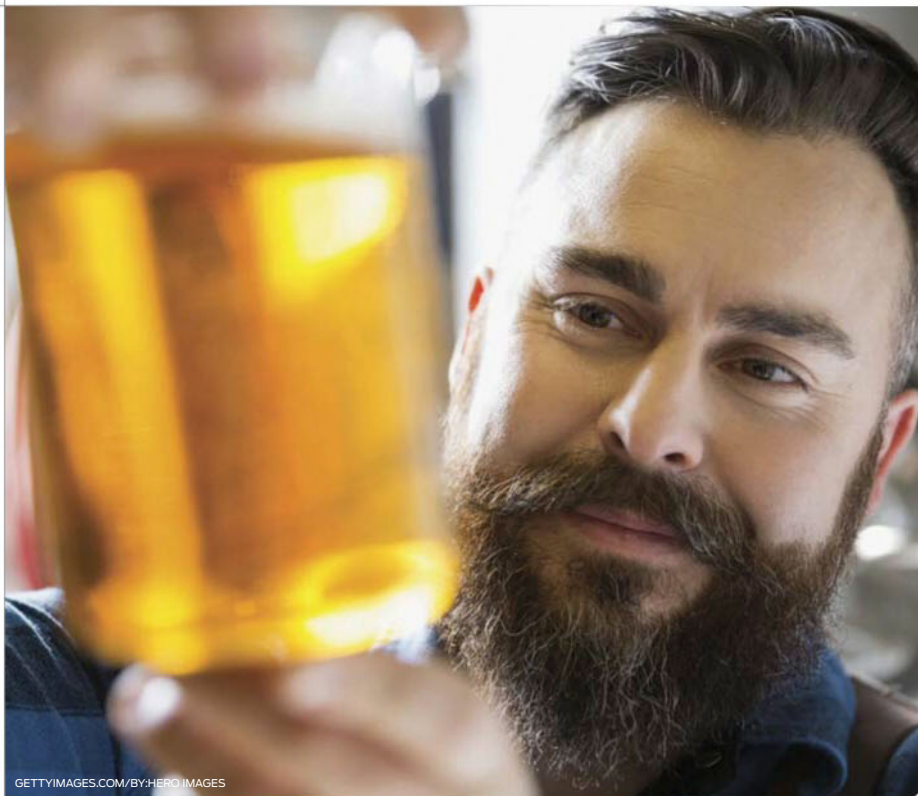
BY PASCAL BAUDAR

Yes, at first glance, it seems like a strange concept. But I often tell students attending my wild edibles and food preservation classes that knowing how to make beers is a wonderful survival skill and should be high on the list for anyone interested in self-reliance in dire times. I jokingly tell them that if they know how to make beers, they'll be assigned body guards for protection.

And no, I'm not talking about what is presently called a "beer," which, per the modern definition, is an alcoholic beverage made of hops and grains. I'm talking about the ability and know-how to create tasty brews with what nature has to offer. Essentially, this is the skill for which you can wander around in nature, pick up local plants and make delicious alcoholic concoctions.

BEER AS A BARTERING COMMODITY

If you think about it, it's really not that strange a concept. A few years ago, I interviewed my father (who grew up in a European urban environment as a teenager during World War II). His experience and educated insight into that era's somewhat desperate and chaotic situation was really an eye-opener. Stuck in a city, survival was



GETTYIMAGES.COM/BY:HERO IMAGES

“EACH OF THE COMPONENTS NECESSARY FOR BEER-MAKING ALREADY EXISTS IN THE ENVIRONMENT.”



GETTYIMAGES.COM/BY:MINT IMAGES

a matter of relying on each other, making friends—and, foremost, acquiring skills that made you a valuable person.

War and social chaos have an interesting way of altering people's social status. Someone who has skills that are truly needed, such as a mechanic, electrician, carpenter or dentist, becomes much more important than, for instance, an accountant, photographer, architect, writer or salesman. Having the ability to create something that can be traded for another necessary product cannot be underestimated.

If you study urban survival in a somewhat long-term chaotic environment, you'll realize very fast that one of the first things that happens is the creation of an underground black market. People will connect with each other to exchange products that help their survival and promote their well-being. Interestingly, those things are not always necessities; very often, they are the goods and products that make life more bearable in harsh conditions.

When I asked my father about what people were looking for during that time, his answers really surprised me. Aside from food and basic medicine, very high on the list were things such as gasoline, cosmetics, tobacco, coffee and ... alcohol.

My grandfather survived the war and fed

his family through fixing trucks and selling tobacco on the black market in exchange for the necessities he needed, such as food. He also raised rabbits and pigeons in the attic on the side.

This was true for my dad in the 1940s, but the same scenario keeps repeating throughout history. My Armenian neighbor had a successful black market business distilling grapes and making brandy during the Iranian revolution in the 1970s.

As he pointed out, "You adapt, improvise and do what is necessary to feed your family."



◀ The beer-making process is demonstrated at one of the author's brewing workshops.

But, as a long-term student of nature, I'll share an interesting secret: If you only think of brewing as a convenient way to create a product you can barter with, you'll miss some fascinating facts.

In the old days, it was more common for people to drink beer and wine than water. The main reason was simple: pollution and, therefore, the potential of getting sick from bacteria. In the Middle Ages, trash and human excrement were thrown into rivers, and "drinking water" was pretty much guaranteed to make someone sick. At the time, they didn't understand the concept of bacteria, but they knew that drinking beer or wine was safer.

From a modern perspective, it's easy to see that boiling beer's ingredients was basically pasteurization, and wine came directly from grapes without the use of water. The natural fermentation of grapes was also a good way to get rid of unwanted microbes.

As I read through old beer recipes, I also found a tremendous amount of recipes for medicinal beers. A beer made with willow bark as a bittering agent could be used to reduce fever. Horehound beer was brewed

as a cold and flu remedy. Nettles beer, due to its high level of vitamin C, was an excellent remedy for scurvy. From a culinary, and even a survival, perspective, (wild) beers have numerous uses. You can also use them for cooking; in fact, a lot of game meat tastes really good in a beer stew.

If you are interested in delving further into this subject, there are many wild plants you can use to make wild beers. I discuss these plants in my book, *The New Wildcrafted Cuisine* (Chelsea Green, 2016). In addition, Stephen Harrow Buhner's *Sacred and Healing*

› Below: The author gives out samples of homemade beer at one of his workshops.



GETTYIMAGES.COM/BY:RONBAILEY



Herbal Beers is regarded as the “bible” of wild brewing.

BREW YOUR OWN

Making simple and primitive beers is really easy. Chances are, you already have most of the following ingredients in your kitchen: water, sugar, yeast and plants. That's it. The only things I advise people to purchase are an airlock and swing-top bottles for storing the beer.

Each of the components necessary for beer-making already exists in the environment. Our job is to combine them properly so nature can do its magical transformation.

Sugar can be found in various natural sources, such as cane, sugar beets, tree sap (maples, birch, box elder, sycamore, etc.), and even insect excretions (honey and lerp sugar). For primitive beer-making, I mostly use brown sugar, molasses or maple syrup. White sugar is better for wine making.

Yeast is present everywhere, including the air you're breathing right now. However, it can be found in larger quantities on various plants, flowers or berries. (For instance, if you see berries or fruits with a white bloom, that bloom is mostly yeast.)



“MAKING SIMPLE AND PRIMITIVE BEERS IS REALLY EASY. CHANCES ARE, YOU ALREADY HAVE MOST OF THE ... INGREDIENTS IN YOUR KITCHEN ... ”





- < 3 lemons (optional)
- < Brown sugar
- < Yeast (wild yeast starter or purchased yeast)
- < Large pot with lid
- < Airlock (a device that allows fermentation gas to escape but prevents insects and bacteria from getting in)
- < Sieve
- < Funnels (one small and one big)
- < Swing-top bottles (at least seven 16-ounce bottles for 1 gallon of beer). Regular beer bottles might not be able to sustain the internal fermentation pressure.
- < Measuring spoon

HOW-TO

Gather the ingredients you will use to make the beer (mugwort, sugar, lemons, etc.). For 1 gallon, you'll need—

- < 0.3 ounce (around 8 grams) dried mugwort leaves
- < 1¼ pounds dark brown sugar (577 grams)
- < 3 large lemons
- < Yeast



Place a bunch of those berries in sugar water, cover the container with cheesecloth and stir three times daily. Within three or four days, you will see some nice bubbling. Congratulations! You've just made your first beer starter. (Alternatively, you can purchase beer yeast online or in a local beer supply store.)

To make it simple, we'll use a plant that can be found everywhere in North America: mugwort (*Artemisia vulgaris*). This plant was used in the old days instead of hops. Do some research online, or find someone who can help you identify the plant. You'll be able to make a basic beer with mugwort.

NOW, THE RECIPE ITEMS LIST

- < Mugwort
- < Water: 1 gallon or 3.75 liters





moving up the airlock. Let it ferment for 10 days. Then, using a funnel, pour the contents into swing-top bottles. Bottles and funnel should be thoroughly cleaned before use.

Fill the beer bottles until you reach the beginning of the neck. When done, prime each bottle with ½ teaspoon of white or brown sugar. Close the top and wait four or five weeks. Enjoy! **ASG**



Place all the ingredients into a pot and bring the solution to a boil for around 30 minutes. (You're basically making a tea.) Remove the pot and put it into cold water to cool down the solution to a lukewarm temperature of around 70 degrees (F). Keep the lid on to make sure airborne bacteria or insects such as flies don't infect your brew. Change the water as necessary to cool down the liquid faster.

Once the solution has cooled, pour the liquid through a clean sieve and funnel it into your main fermenter (a bottle or fermenting bucket). Add the yeast. If you are using a wild yeast starter, a half pint of liquid should be enough.

Place the airlock and fill it with water up to the lines indicated on the airlock. If you don't have an airlock, you can also place a clean towel or paper towel secured with a rubber band.

Within 24 to 48 hours, the fermentation should be active, and you will see froth forming on top of the liquid and bubbles

ESTATE SALE - LOG HOMES PAY THE BALANCE OWED ONLY!!!

AMERICAN LOG HOMES IS ASSISTING LIQUIDATION OF **NEWLY RELEASED** ESTATE & ACCOUNT SETTLEMENT ON HOUSES.

3 LOG HOME KITS - SELLING FOR BALANCE OWED, FREE DELIVERY

- | | |
|---------------------------|--------------------------------------|
| 1) Model #101 Carolina | \$40,840 . . . BALANCE OWED \$17,000 |
| 2) Model #303 Little Rock | \$38,525 . . . BALANCE OWED \$15,000 |
| 3) Model #403 Augusta | \$42,450 . . . BALANCE OWED \$16,500 |

VIEW AT: WWW.LOGHOMEDREAM.COM CLICK ON HOME PLANS

NEW-HOMES HAVE NOT BEEN MANUFACTURED

- Make any plan design changes you desire!
- Comes with Complete Building Blueprints & Construction Manual
- Windows, Doors and Roofing not included
- NO TIME LIMIT FOR DELIVERY!

**BBB
A+ Rating**

**SERIOUS ONLY REPLY
CALL (704) 602-3035 ASK FOR ACCOUNTING**





GETTY IMAGES.COM/BYVITALINA RYBAKOVA

USING SUGAR TO TREAT WOUNDS

A VERY OLD, VERY SIMPLE—AND PAINLESS—REMEDY

BY ALAN HALCON



“THE USE OF SUGAR AND HONEY ON OPEN WOUNDS IS DEEPLY ROOTED IN OUR HISTORY.”

Next time you're out camping and you cut yourself, you might consider grabbing the sugar and pouring it on the wound—seriously!

In 2008, I attended an event during which I was privileged to sit in on a first aid class run by certified wilderness medicine expert Brian Phaneuf of RAEMS (Remote Area Emergency Medicine and Survival).

One of the highlights of the class was Phaneuf's discussion about the use of sugar as an antibacterial topical application for open wounds. I had never heard of this. Needless to say, my interest was piqued.

The use of sugar and honey on open wounds is deeply rooted in our history. Research shows that both were used to treat the wounds of combatants thousands of years ago.

"It's a very old and very simple treatment that was forgotten for a while but is now coming back, like a fashion," said Professor Rudy Siewert, chairman of the department of surgery at the Klinikum Rechts der Isar in Munich, West Germany.

The now-retired Richard A. Knutson, M.D., a surgeon formerly at the Delta Medical Center in Greenville, Mississippi, learned about the use of sugar on wounds from an elderly nurse. Concerned about a patient's bed sore so deep that it was down to the bone, the nurse told him, "In the old days, we used to put sugar on these wounds."

Knutson was skeptical, but he gave it a try. To his surprise, within a couple of days, the wound was free of pus and, with continued use of sugar dressings, healing was complete. He went on to treat and document nearly 7,000 wounds of all sizes—ulcers, abrasions, lacerations, amputations, abscesses, gunshot wounds, frostbite, punctures, post-operative incisions, cat scratches, burns and bites (dog, human, snake, spider—and, believe it or not, one lion bite).

Knutson tells of a patient who had accidentally shot himself in the foot with a shotgun at close range. After the bleeding was stopped and the wound cleaned, Knutson packed it with sugar and

wrapped it up. Seven weeks later, it had completely healed. Today, the patient is fully functional.

"When we started, I thought it was absolutely nuts!" Knutson said in a telephone interview. "Sugar! The first thing you think about is the old jar of marmalade in the fridge, growing all that junk. You think you'll create a perfect medium for bacterial growth. That turned out not to be the case."

Knutson has since used a salve made of sugar, which he mixes with a mild, bacteria-killing iodine liquid, and applies it to wounds ranging from mild cuts to shotgun wounds.

"It's easy to use, painless, inexpensive—and, it works," he said, "You can't ask for more from a product. If it had a fancy name and cost \$300 a bottle, everyone would be buying it."

HONEY (GLUCOSE STRUCTURE)

Bees use an enzyme known as glucose oxidase to make honey. Glucose oxidase breaks down glucose (sugar) into hydrogen peroxide, making it a great antiseptic used to fight germs. The amount of hydrogen peroxide is limited, occurring where the moisture contacts the honey, creating a fine oxidizing layer that literally "rusts" the germs to death ... along with dehydrating them.

Honey is hygroscopic (it draws moisture from its surroundings) in nature. Bacteria that come into contact with honey lose their moisture content through osmosis to the surrounding honey and die.

- ◀ Honey's slightly acidic pH (between 3.5 and 4) discourages the growth of bacteria.
- ◀ Honey's antibacterial quality not only rapidly clears an existing infection, it also protects wounds from additional infection.
- ◀ Honey debrides (removes dead tissue from) wounds and removes malodor.
- ◀ Honey's anti-inflammatory activity reduces edema and minimizes scarring.
- ◀ Honey stimulates growth of granulation and epithelial tissues to speed healing.

› Research shows that both honey and sugar were used to treat the wounds of combatants thousands of years ago.

GETTYIMAGES.COM/BY:CHRIS CROCKER / EYEEM



› Sugar, like honey, is hygroscopic and, through osmosis, kills bacteria.

SUGAR (SUCROSE STRUCTURE)

◀ In 1976, Doctors Herszage and Montenegro of Argentina used ordinary sugar to treat the wounds of two patients with post-surgical necrotic cellulitis.

◀ In 1980, these two doctors reported the use of sugar paste in 120 infected wounds and recorded a cure rate of 99.2 percent. It was observed that odor and secretion began to diminish within 24 hours and disappeared totally after 72 to 96 hours of treatment.

◀ In 1985, Trouillet, et al., used commercially available granular sugar to treat 19



GETTYIMAGES.COM/BY:ALEXANDRA GRABLEWSKI

patients with acute mediastinitis (infection in the middle of the chest cavity) after heart surgery. After an average of 7.6 days of treatment, eradication of bacterial infection was noted, along with the granulation of tissue.

◀ Sugar, like honey, is hygroscopic and, through osmosis, kills bacteria. To use it, you place it directly on the wound. When the sugar on the wound begins to liquefy and turns into a glazed, runny substance, it is losing its hygroscopic ability, along with its bacteria-killing osmotic pressure. Clean the wound thoroughly and reapply sugar. This might have to be repeated several times.

◀ Unlike honey, however, sugar doesn't have the benefits of bees to create the disinfectant hydrogen peroxide. It also does not have the viscosity of honey, which might make it difficult to keep the healing properties of sugar packed into the wound. Fortunately, there is a way to make a gel-like, sugary substance that does contain a disinfectant.

SUGARDINE

Horse owners have undoubtedly heard of "sugardine" if they've ever had to treat their horses for thrush. Unlike using sugar in certain wounds, sugardine is easily packed into a wound and stays there, because it's a paste. It also has the added benefit of containing an antimicrobial.

◀ To make "sugardine," mix about 80 percent white table sugar with 20 percent of 10 percent povidone or betadine to form a paste.

◀ Stronger solutions than 10 percent povidone or betadine have been found fatal when over 30 percent of a person's intact skin was painted with the solution. In addition, using tincture of iodine might cause toxicity if applied to burns or large wounds.

◀ A standard field treatment is to first control the bleeding (usually by direct pressure), debride (remove dead or dying tissue), flush the wound, place sugar into the wound and cover with a povidone-soaked light dressing. Caution should be used with sugar placed directly on a "bleeding" wound, because its hygroscopic ability may cause more bleeding.

FINALLY

The use of any of these treatments is, in no way, a replacement for seeking professional medical attention. The purpose of this article is to provide the reader with information about things that have been done and are currently being done to treat certain injuries.

In a grid-down situation or where help is not available, having this knowledge can help prevent something as benign as a paper cut from turning into a life-threatening situation. **ASG**

WHAT OTHERS ARE SAYING

THE U.S. ARMY FIELD MANUAL 3-05.70 SURVIVAL

◀ SUGAR: Place directly on wound and remove thoroughly when it turns into a glazed and runny substance. Then, reapply.

◀ BEE HONEY: Use it straight or dissolved in water.

◀ SYRUP: In extreme circumstances, some of the same benefits of honey and sugar can be realized with any high-sugar-content item.

SCIENCEDAILY (OCTOBER 19, 2007)

"Honey has a number of properties that make it effective against bacterial growth, including its

high sugar content, low moisture content, gluconic acid (which creates an acidic environment) and hydrogen peroxide. It has also been shown to reduce inflammation and swelling."

SCIENCEDAILY (APRIL 7, 2006)

"Substantial evidence demonstrates that honey, one of the oldest healing remedies known to medicine, produces effective results when used as a wound dressing. Scientists performed 22 trials involving 2,062 patients treated with honey, as well as an additional 16 trials that were performed on experimental animals."

EXCLUSIVE SURVIVAL GUIDANCE!

YOUR
TIME ARK SERVICE MODULES
HAVE RETURNED
FOR YOUR DUE SURVIVAL



www.ATABASE.info

A photograph of a field of aloe vera plants in the foreground, with rolling hills and a blue sky with white clouds in the background. The text is overlaid on the image.

“IT FINALLY WORKED!”

SOME EXPERIENCES WITH THE REMARKABLE ALOE VERA PLANT

BY CHRISTOPHER NYERGES



➤ A mature
Aloe vera plant

Often touted as one of the "miracle herbs," Aloe vera (and the juices of other Aloes) can be used externally to treat cuts, burns, rashes, poison oak, sunburn and other skin irritations. The processed liquid is also widely sold for various internal conditions and to maintain good health. Aloe vera plants should be in everyone's "survival garden," and a leaf or two should be carried in the pack on every wilderness expedition.

***"ALOE VERA PLANTS
SHOULD BE IN EVERYONE'S
'SURVIVAL GARDEN,' AND
A LEAF OR TWO SHOULD
BE CARRIED IN THE PACK
ON EVERY WILDERNESS
EXPEDITION."***

◀ A young aloe leaf
is cut in half.

CASE IN POINT: LUCILLE

Sometime in late 1978, my mother shared with me an experience she had with the Aloe vera plant. She was a registered nurse who worked at a Pasadena, California, retirement home as the staff nurse. About three months earlier, Lucille, a housekeeper who lived on site at the retirement home, began to break out in a hive-like rash that caused her to itch constantly. The cause was said to be a "nervous condition." Her thighs, back, arms,

◀ A small piece
of the Aloe leaf
is used for skin
issues.

GETTYIMAGES.COM/BY:TIM WINTER

GETTYIMAGES.COM/BY:PHOTOS LAMONTAGNE

GETTYIMAGES.COM/BY:AVALLON_STUDIO

◀ Rubbing some fresh
Aloe gel onto a small
wound will expedite
healing.

shoulders and neck all broke out in this rash, which she described as "burning like fire."

My mother offered to apply the juice of the Aloe leaf to the housekeeper's red spots, but she responded, "No, I'll have the doctor check it." The doctor prescribed Atarax (internally) for the itching and allergies and cortisone (externally), which was applied as a cream. He also prescribed tranquilizers for sleep.

After about 45 days, Lucille told my mother she still could not sleep at night and that the rash hadn't improved. She noted that there was a slight improvement in the rash when she stayed home and didn't go to work, so she and the doctor assumed this was a nervous condition associated with work.

So, my mother asked again if she'd like to try some Aloe. Lucille responded, "Yes, please; bring me anything!" My mother noted that Lucille's skin was hot to the touch, and there were big, red spots all over.

Early in the morning, my mother took a fresh, succulent Aloe vera leaf, slit it open and rubbed the gel on Lucille's arms, legs, back and neck. Lucille said her skin immediately felt better. Eight hours later, all the visibly red spots were gone, and Lucille happily told my mother all the burning and itching were also gone. The next day, Lucille told my mother that that night was the first one she had been able to sleep in those 45 days.

My mother had been somewhat reticent to apply the Aloe, because she was answerable to the doctor and could have lost her license by doing something without his approval. However, when the doctor arrived, she told him Lucille's rash had cleared up, and she admitted to having applied Aloe juice. The doctor was somewhat taciturn as he examined the patient, and, without commenting on the Aloe, told my mother, "It's good that the medicine finally worked." ... Really?!

THE FAMILY CAT

My mother always had a laugh re-telling this story about a doctor who couldn't see the obvious!

Over the years, I had my mother document the many cases for which she used Aloe to cure various skin conditions on her patients, herself (and even our cats): sunburn, burns from hot oil, skin sores, diaper rash, bed sores and even poison oak rash.

Our family cat had a large, open ulcer on his thigh. My mother directed me to put some fresh Aloe gel onto the ulcer every day for three days and also make some of the Aloe leaf into a juice, which was added to the cat's water. The wound was completely healed after three days.

My mother's experiences took place more than 35 years ago. Today, Aloe vera is a common household product. You can buy it just about anywhere. This succulent plant has been studied and researched for many years; many have come to call it a "miracle" herb.

WHAT MAKES ALOE "MIRACULOUS?"

Today, Aloe is used as an antibiotic, astringent, pain inhibitor, emollient, moisturizer and antipruritic (reduces itching), as well as a nutrient. It apparently works because of the polysaccharides present, the main one being a glucomannan. Others ingredients include galactose, uronic acids and pentoses. The "miracle" qualities of Aloe are not attributable only to the polysaccharides but to the synergistic effect of these and other compounds in the leaf, as well.

Many have tried to create An aloe product you can buy in the bottle, and some are quite good. But make no mistake about it: The best results come from the gel from a freshly broken Aloe leaf. **ASG**

Cookstoves Clean, Easy, and Efficient



STOVETECSTORE.NET

AMERICAN
SURVIVAL
GUIDE

Find us on



Be prepared when
disaster strikes.

www.facebook.com/americansurvivalguidemagazine

REVIEW BY DUDE MCLEAN

WHERE TO BUY IT

► *THE UNIVERSAL TOOL KIT: OUT OF AFRICA TO NATIVE CALIFORNIA*, SUNBELT PUBLICATIONS, 2013
MSRP: \$19.95 (HARDCOVER)
WWW.AMAZON.COM

THE UNIVERSAL TOOL KIT: OUT OF AFRICA TO NATIVE CALIFORNIA

BY PAUL CAMPBELL

Paul Campbell's *The Universal Tool Kit: Out of Africa to Native California* is more than just a great read; the way he puts all the pieces together is all-important.

Campbell's books always reflect his first-rate research and practice of a skill. His explanations are clear and are sometimes set in anecdotal style that makes his stories leap off the page.

What are we talking about? What is it? The "universal tool kit" is a simple flaked stone, made by bashing it and then using it as a tool.

This practice goes back hundreds of thousands of years. These stone tools were often overlooked by the experts as trash and leftover detritus. New evidence shows that experts were wrong in many cases. Campbell cites where these stone flakes are found—all over the world—and the reasons they were ignored. In fact, even today, these simple methods are still being used by primitive peoples.

It is not that hard to do basic stone and rock technology; it's in our DNA. All you need to get started are a few rocks our common ancestors used with success for longer than we can count.

The universal tool kit is so light that it is all in your brain. As long as you still have your head, you have the "kit" with you. Using it gives one the feeling of a familiar and ancient connection. It feels right.

Over the years, a few of us have had experience in the field with Campbell, who showed us the way of the stone and its myriad uses. We watched him throw a stone at a huge rockface cliff and see the resulting breakage turn into a few useful tools—from a tool sharp enough to skin a critter to a hammer stone for grinding acorns. Campbell revived the life lessons of our ancestors. He demonstrated that the past does count for something.

Campbell tells his story with pictures of the atlatls and darts he manufactured entirely from a few chips of stone. First, he created a chopping stone with one break to take down a willow; he trimmed it with the sharp chips of stone. He then mounted the hook that a dart would fit into and, with cordage, tied it to the atlatl.

For the darts, he used one stone, broke it in half by a controlled



bash and then used the stone as a rasp by drawing the dart between the two halves of the stone. He skinned the bark from the dart or spear and rubbed it as smoothly as sandpaper would have done. In about two hours, he had a completed atlatl.

I took stone in hand and tried to duplicate the lesson—and made an atlatl. It was not as pretty as I wanted and not as incredible as Campbell's, but it was functional. My first attempt, while crude, was a huge learning experience. From a rock, you can develop choppers, hand axes, bi-faces, scraper planes, blades and more.

And that's the universal tool kit. **ASG**

◀ Paul Campbell shows students how he made his bow and arrows with a single stone.

AD INDEX

July 2016

ADVERTISER	PAGE
American Log Homes	119
ATABASE	123
Battlbox LLC.....	69
BRAVO Company	2
Condor Outdoor.....	132
Elite Survival Systems	111
European American Armoury.....	99
Ground EFX.....	3
Hoppes.....	83
Kershaw Knives	131
LifeStraw.....	35
Major Surplus & Survival.....	10-11
Ontario Knife Company	53
Secure Medical	85
StoveTech/Aprovecho Research Center.....	127
Tactical Night Vision Company.....	21
TOPS Knives	7
Tormach LLC.....	129

The Advertiser Index is provided as a service to American Survival Guide readers. American Survival Guide is not responsible for omissions or typographical errors on names or page numbers.

Enable Your Ideas with a PCNC Mill

Discerning gun and knife enthusiasts know there's only one choice in CNC for affordable precision: the Tormach PCNC 1100. Take aim at your most demanding machining needs - engraving, milling, threading, reaming, and boring. Big or small, Tormach hits the bullseye to deliver for you.



Shown here with optional stand, LCD monitor, machine arms, and accessories.

Tormach PCNC 1100 Series 3 starting at **\$8480** (plus shipping)



Cantilever GoPro camera Picatinny Mount made by Strikemark, manufactured on a PCNC 1100.



Follow knifemaker John Grimsno as he makes his own knives with a PCNC 1100 on his web series, Knifemaking Tuesdays, at www.tormach.com/kmt.

www.tormach.com/asg



Get One Issue FREE!
+
SAVE 76% on Annual Subscription

SUBSCRIBE NOW

To Your Favorite American Survival Guide Digital Magazine

Just log on to
ENGAGEDMEDIAMAGS.COM/EEM-5017

OR
SCAN QR CODE BELOW



***12 issues for only \$27.99**

Single issues are also available at **\$6.99**.

For questions on downloading the magazine apps contact 800-764-6278.
For a full listing of our digital titles, visit www.engagedmediamags.com/digital today!

Available on app stores below



WORDS

LAST

SURVIVAL ***IN ALL ITS*** ***ASPECTS***

"Survival" is a broad term that ties us all together. In fact, in the broadest sense, just about everything we do is about survival. Well, maybe not today, because we've grown so technologized and specialized that we take everything for granted and have forgotten our roots.

Think about the progression from foraging to agriculture and then to farming, food storage and processing. That's all about food—a survival basic. The development of villages, towns and cities was all about pooling our resources so we could work together for our mutual survival. With towns and many people packed together, you need some sort of guidelines; thus, the development of government, police and fire departments and even the building and safety departments of most cities. All aspects of the building industry exist for our mutual survival.

So many areas of our basic survival have been developed over the last few hundred years that we tend to forget that someone had to complete all those steps to make survival possible—and easy. We have traveled a long path down the road from our grandparents, who were still rural and who knew how to live in the woods and raise food. The farther we travel down the technology path, the less we seem to know about how to do the most very basic tasks

that ensure personal survival and strength.

What do you do? How should you go forward in this ever more complex and ever more dangerous world? Of course, you should read *American Survival Guide* and make sure your friends and family read it, too.

And, yes, you should obtain the gear and supplies you need, just in case circumstances won't allow you to do so if a natural or man-made catastrophe happens.

But even more importantly, expand your perspective and raise your awareness.

I suggest reading some books and trying to grasp the deep message each contains. Consider these messages "survival tools" for your future. I am only suggesting a few books, but each is a valuable tool in understanding the world we live in, as well as our future.

The Twilight of American Culture, by Morris Berman, is a thoughtful look at the decline of Western civilization and what can be done about it (if anything).

Language in Thought and Action, by S.I. Hayakawa, is perhaps the single best book about how the words we choose affect our reality and how we can improve our ability to think.

True Believer, by Eric Hoffer, is the quintessential book on mass movements and cults. It teaches you how to "believe." Although it was written decades ago, this book provides unique insight into today's terrorist movements and other forms of mob mentality.

Democracy Is Self-Government, by H.W. Percival, is a must-read if you want to grasp what is wrong with modern politics. The author shows that individual self-government is the only path to real democracy.

And last, *The Art of Loving*, by Eric Fromme, shares how love is the answer to the problem of human existence. He attempts to define the many real and counterfeit forms of love.

Sure, you have your knife, gear and pantry of food, but don't stop there. **ASG**



GO AHEAD & PRY

The guy who taught you about tools always said it. His daddy probably said it, too: "Never pry with your knife." But that's because they didn't have the new Kershaw Barge. The Barge has an integral prybar built into the back of the knife. Of course, with its razor-sharp modified Wharncliffe utility blade, the other end is pretty handy, too. And so are you—when you've got the right tools.

What are YOU carrying?

BARGE 1945

MSRP \$34.99



kershaw®

kershawknives.com





BE PREPARED

STEALTH OPERATOR PANTS

DISCRETION DOESN'T NEED TO BE ADVISED. THE CONDOR STEALTH OPERATOR PANTS BLEND INTO THE ENVIRONMENT WITH NO EFFORT. IT'S LIGHTWEIGHT CONSTRUCTION OF POLY-COTTON-SPANDEX PROMOTES MOISTURE-WICKING AND BREATHABILITY WHILE YOU'RE ON THE GO.



SENTINEL TACTICAL PANTS

THE CONDOR TACTICAL PANTS ARE MADE FROM DURABLE RIPSTOP MATERIAL TO TAKE THE BEATING THAT YOU PUT IT THROUGH, WHILE HOLDING ALL THE GEAR YOU NEED FOR THE MISSION. EQUIPPED WITH POCKETS FOR YOUR GADGETS, KNIFE, TOOLS, EXTRA MAGS, AND OTHER UTILITIES.



CONDOROUTDOOR.COM